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No. 01-714

IN THE

Supreme Court of the United States

STATE OF UTAH, *et al.*,

Appellants,

v.

DONALD L. EVANS, *et al.*,

Appellees.

On Appeal from the United States District Court for the District of Utah

JURISDICTIONAL STATEMENT

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QUESTIONS PRESENTED

1. Whether the court below erred in ruling that the Census Bureau may use the statistical method of "hot-deck imputation" to estimate unobserved segments of the population for purposes of congressional apportionment, despite this Court's ruling in *Department of Commerce* v. *United States House of Representatives*, 525 U.S. 316 (1999), that the Census Act prohibits the use of any statistical sampling in the apportionment count.

2. Whether the court below erred in ruling that the Census Bureau may, consistent with the constitutional requirement that congressional representation be apportioned pursuant to an "actual Enumeration" of each State's population, use the statistical method of hot-deck imputation to estimate unobserved segments of the population.

PARTIES TO THE PROCEEDING

The appellants herein, who were plaintiffs before the three-judge district court, are the State of Utah; Michael O. Leavitt, Governor; Olene S. Walker, Lieutenant Governor; Mark L. Shurtleff, Attorney General; L. Alma Mansell, President, Utah Senate; Martin R. Stephens, Speaker, Utah House of Representatives; Mike Dmitrich, Minority Leader, Utah Senate; Ralph Becker, Minority Leader, Utah House of Representatives; U.S. Senators Orrin G. Hatch and Robert F. Bennett; U.S. Representatives James V. Hansen, Christopher B. Cannon, and James Matheson; and Utah residents Blake J. Russon, Michael Wayne Anderson, Brent McGhie, and Jean McGhie.

The appellees in this Court, who were the principal defendants below, are Donald L. Evans, Secretary of the United States Department of Commerce; and William G. Barron, Acting Director of the United States Census Bureau.

Additional appellees, who appeared as defendant-intervenors below, include the State of North Carolina; Michael F. Easley, Governor; Beverly Perdue, Lieutenant Governor; Roy Cooper, Attorney General; Marc Basnight, President Pro Tempore, North Carolina Senate; James Black, Speaker, North Carolina House of Representatives; Patrick Ballentine, Minority Leader, North Carolina Senate; Leo Daughtry, Minority Leader, North Carolina House of Representatives; U.S. Senators Jesse Helms and John Edwards; and U.S. Representatives Eva M. Clayton, Bob Etheridge, Walter B. Jones, David Price, Richard Burr, J. Howard Coble, Mike McIntyre, Robin Hayes, Sue Myrick, T. Cass Ballenger, Charles H. Taylor, and Melvin L. Watt.

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OPINION BELOW

The opinion of the three-judge district court, *Utah* v. *Evans*, No. 2:01-CV-292G (D. Utah Nov. 1, 2001), is unpublished, and is reproduced at App. 1a-34a.

JURISDICTION

The judgment of the three-judge district court was entered on November 5, 2001. This Court has jurisdiction pursuant to 28 U.S.C. §§ 1253, 2101(b), and the Departments of Commerce, Justice, and State, the Judiciary, and Related Agencies Appropriations Act, 1998, Pub. L. No. 105-119, § 209(e)(1), 111 Stat. 2440, 2482.

CONSTITUTIONAL AND STATUTORY PROVISIONS INVOLVED

1. Article I, Section 2, Clause 3 of the United States Constitution is reproduced at App. 37a.

2. Sections 1 and 2 of Amendment XIV of the United States Constitution are reproduced at App. 37a-38a.

3. Sections 141(a) and 195 of Title 13, United States Code, are reproduced at App. 39a.

STATEMENT OF THE CASE

In this lawsuit, the State of Utah, many of its elected officials, and four Utah residents (collectively, "Utah") challenge the unlawful use of a form of statistical sampling in the decennial census. Specifically, in the 2000 census the Secretary of Commerce and the Director of the Census Bureau (collectively "the Bureau") used a statistical sampling technique known as "hot-deck imputation" to estimate unenumerated segments of the population for purposes of congressional apportionment. The Bureau's use of that technique was not only unlawful and unconstitutional; it

indisputably deprived Utah of a fourth seat in the House of Representatives.

In upholding the Bureau's use of hot-deck imputation, the three-judge district court suggested that the term "sampling," as used in the Census Act, 13 U.S.C. § 195, refers only to *random* sampling procedures, *i.e.*, statistical techniques that involve the random "'selection of a subset of units from a larger population in such a way that each unit of the population has a known chance of selection.'" App. 19a (quoting *Orr* v. *Baldridge*, No. IP-81-604-C, slip. op. at 5-7 (D. Ind. July 1, 1985)). The district court also concluded that hot-deck imputation, while concededly a statistical procedure used to "estimat[e] unreachable people," *Department of Commerce* v. *United States House of Representatives*, 525 U.S. 316, 348 (1999) (Scalia, J., concurring), is nevertheless consistent with the Census Clause's requirement that the decennial census consist of an "actual Enumeration" of each State's population.[1]

1. The census is conducted pursuant to Article I, Section 2, Clause 3 of the United States Constitution. As modified by the Fourteenth Amendment, this "Census Clause" requires Congress to conduct an "actual Enumeration" of "the whole number of persons in each State" every ten years, and to use that enumeration as the basis for apportioning seats in the House of Representatives. U.S. Const. art. I, § 2, cl. 3; *id.* amend. XIV, § 2. Through the Census Act, 13 U.S.C. § 1 *et seq.*, Congress has delegated responsibility for conducting the census to the Secretary of Commerce, who is directed to conduct "a decennial census" of the "population" of each

[1] The same parties are currently involved in an appeal from another decision rendered by a separate three-judge panel of the United States District Court for the District of Utah. In that case, the district court rejected Utah's challenge to the Census Bureau's partial enumeration of the overseas population. *See* Jurisdictional Statement, *Utah* v. *Evans*, No. 01-283 (U.S. filed Aug. 14, 2001).

State on "the first day of April of [each census] year." 13 U.S.C. § 141(a). The portion of the decennial census that is used to apportion congressional representation is often referred to as "'the apportionment count.'" Pls.' Statement of Undisputed Facts ("SUF") ¶ 1, *attached to* Pls.' Mem. in Supp. of Summ. J. ("Utah Mem."), *Utah* v. *Evans*, No. 2:01-CV-292G (D. Utah filed June 11, 2001).

2. In preparing to conduct the apportionment count in the 2000 census, the Census Bureau first compiled a "Master Address File"—*i.e.*, a comprehensive list of all known or potential housing units within the United States—with the assistance of the United States Postal Service, other federal agencies, tribal, state, and local governments, and community organizations. See SUF ¶ 5. The Bureau then attempted to contact and count the occupants of every household on the Master Address File. First, the Bureau sent census questionnaires to each unit listed on the Master Address File, and directed the occupants thereof (if any) to complete the questionnaire and mail it back to the Bureau. See *id.* ¶ 7.

The Bureau then conducted various "non-response follow-up" procedures in an attempt to enumerate all housing units listed on the Master Address File whose occupants did not complete a census questionnaire. For example, census enumerators attempted to contact the occupants or neighbors of non-responding housing units (either by telephone or through a personal visit) so that they could complete missing census questionnaires based upon an interview with a member of the household or with a neighbor. Enumerators were instructed to make up to six attempts to contact all housing units whose occupants had not completed a census questionnaire, unless or until such units had been identified as vacant or non-existent. *Id.* ¶ 11; Federal Defs.' Mem. in Opposition to Summ. J. ("DOJ Mem.") at 20, *Utah* v. *Evans*, No. 2:01-CV-292G (D. Utah filed July 11, 2001).

At the conclusion of the non-response follow-up process, non-responding units that the Bureau had neither enumerated

nor declared vacant or non-existent were assigned an "unknown" status. The assignment of an unknown status indicated that census enumerators were unable to determine (1) whether such units actually existed, (2) whether they were occupied or vacant, or (3) the number of persons residing therein.

The Bureau then used a statistical procedure known as "hot-deck imputation" to estimate the occupancy characteristics of all such units—even those whose existence the Bureau had never confirmed. Indeed, the Bureau's *only* basis for concluding that many such units even existed was the Master Address File, which is known to contain a large number of addresses that do not represent housing units, but instead represent businesses, storage units, or even typographical errors. See, *e.g.*, *Oversight of the 2000 Census: Status of Nonresponse Follow-Up and Closeout: Hearing Before the House Subcomm. on the Census of the Comm. on Gov't Reform*, 106th Cong. 57 (2000) (testimony of Census Bureau Director Kenneth Prewitt); DSSD Census 2000 Procedures and Operations Memorandum Series #D-13 from Howard Hogan, Bureau of the Census, to Michael J. Longini, Bureau of the Census 1 (Dec. 21, 2000) (Administrative Record ("AR") C01585, *Utah* v. *Evans*, No. 2:01-CV-292G (D. Utah filed July 11, 2001)). Nevertheless, the Bureau assumed that each estimated unit had the same occupancy characteristics as a nearby "donor" unit. Generally, the "donor" was the estimated unit's geographically closest neighbor that was enumerated during the non-response follow-up procedure. See SUF ¶¶ 13, 31.

3. In compiling the apportionment counts in the 1960, 1970, 1980, and 1990 censuses, the Bureau used imputation to estimate several hundred thousand persons presumed to be living in housing units that the Bureau had found to exist, but for which no population count was reported. *Id.* ¶ 17. The Bureau used the same procedure in the 2000 census. This time, however, it also expanded its use of hot-deck imputation

to estimate the presumed occupants of housing units whose existence it had *not* verified.[2] *Id.* ¶ 18.

The Bureau's use of hot-deck imputation in the 2000 census increased the apportionment count by 0.4%, which was more than enough to affect congressional apportionment. In fact, it is undisputed that if the Bureau had not used imputation—or even if it had used the procedure only with respect to addresses that were known to represent existing housing units—Utah would have been entitled to a fourth seat in the House of Representatives beginning in 2003. *Id.* ¶ 46-47.[3]

The hot-deck imputation procedure at issue here is remarkably similar to the procedure invalidated in *Department of Commerce* v. *United States House of Representatives*, 525 U.S. 316 (1999). In that case, this Court held that the Census Act, 13 U.S.C. § 195, prohibits the use of statistical sampling in the apportionment count. In so doing, the Court invalidated the Bureau's proposed use of a random

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[2] Appellees argued below that the Bureau began using hot-deck imputation to estimate the occupants of housing units not known to exist in 1990. The Bureau's own documents indicate otherwise. *See* SUF ¶ 17 & n.4. But even if the Bureau did use imputation to estimate households of unknown existence in the 1990 census, it did so on a much smaller scale, and its decision to do so did not affect congressional apportionment. *See id.* In the 2000 census, by contrast, the Bureau's estimation of unverified or "phantom" housing units had a distinct impact on apportionment. Indeed, appellees do not dispute that Utah would have been entitled to a fourth seat if the Bureau had adhered to its prior practice of using hot-deck imputation to estimate the "phantom occupants" of housing units known to exist, but not the phantom occupants of phantom housing units. *See* SUF ¶ 47.

[3] The Bureau's use of hot-deck imputation caused what would have been Utah's fourth seat to become North Carolina's thirteenth, but had no other effect on congressional apportionment. Thus, if imputation-derived estimates were removed from the apportionment count, Utah would be entitled to four seats beginning in 2003, North Carolina would be entitled to twelve seats, and no other State would be affected. *See* SUF ¶¶ 46-47.

sampling procedure designed to enable the Bureau to estimate unobserved segments of a particular population by reference to observed segments or "samples" of the same population.

Using the random sampling procedure at issue in *House of Representatives*, the Bureau planned to limit its non-response follow-up efforts to a randomly selected subset or "sample" of all non-responding units in each neighborhood or "census tract." See 525 U.S. at 324. The Bureau would have used information gathered from the "sampled" units in each tract to "estimate the [occupancy] characteristics [of each] of the remaining" non-responding units in the same tract for which it had no information. *Id.* at 324-25. While the Bureau had not yet settled on a precise methodology for creating those estimates when this Court issued its ruling in *House of Representatives*, the Administrative Record compiled by the appellees in this case suggests that the Bureau would have assumed that each non-sampled unit had the same occupancy characteristics as its geographically closest sampled neighbor or "donor." See Robert E. Fay, *Theory and Application of Nearest Neighbor Imputation in Census 2000*, 1999 Proc. for the Sec. on Surv. Res. Methods, Am. Stat. Ass'n 112, 113-14, 116 (AR at C01647-C01656). The Bureau planned to estimate roughly 10% of the population using this technique. See SUF ¶ 27.

4. Utah filed this lawsuit on April 25, 2001, alleging that the Bureau's use of hot-deck imputation deprived Utah of a fourth Representative and was unlawful under the Census Act and the Census Clause. Utah sought declaratory and injunctive relief directing the Bureau to remove all imputation-derived estimates from the apportionment count, and to submit a corrected apportionment tabulation to the President.

Although the Bureau was the principal defendant named in the complaint, it was later joined by the State of North Carolina and several of its officers and representatives, who intervened as defendants soon after the case was filed. Utah

moved for summary judgment on all of its claims on June 11, 2001. Both sets of defendants subsequently moved to dismiss and cross-moved for summary judgment.

Utah presented undisputed evidence demonstrating that it would have been entitled to a fourth Representative following the 2000 census if the Bureau had not adjusted the apportionment count with estimates derived through hot-deck imputation. See SUF ¶¶ 45-47. It advanced two principal arguments in support of its claim that the Bureau's use of hot-deck imputation was unlawful.

First, Utah showed that, like the sampling procedure invalidated by this Court in *Department of Commerce* v. *United States House of Representatives*, 525 U.S. 316 (1999), the Bureau's hot-deck imputation procedure is a statistical tool that enables the Bureau to estimate unobserved segments of a particular population by reference to observed segments or "samples" of the same population. Thus, Utah argued, the Bureau's use of imputation cannot be reconciled with 13 U.S.C. § 195, which prohibits the use of "the statistical method known as 'sampling'" in the apportionment count.

Second, Utah showed that, by using hot-deck imputation, the Bureau failed to comply with its constitutional duty to conduct an "actual Enumeration" of each State's population. Like the procedure at issue in *House of Representatives*, hot-deck imputation is a statistical procedure used to produce *estimates* of difficult-to-enumerate segments of the population, and cannot constitute part of an actual enumeration. Its use in the decennial census therefore violates the Census Clause under the reasoning of the four-Justice concurrence in *House of Representatives*, 525 U.S. at 348 (1999) (Scalia, J., concurring).

5. The three-judge district court heard oral argument on all dispositive motions on August 29, 2001. In a memorandum opinion dated November 1, 2001, the court (Murphy, J., joined by Kimball, J.) issued a divided opinion granting

summary judgment for the defendants and dismissing each claim raised by Utah.

As to Utah's statutory claim, the district court reasoned that "statistical sampling and imputation are separate statistical methodologies" and that they "were viewed as such at the time of the enactment of § 195." App. 18a. In reaching that conclusion, the district court relied almost entirely on the reasoning employed in *Orr* v. *Baldridge*, No. IP-81-604-C, slip op. at 5-7 (S.D. Ind. July 1, 1985). The court all but ignored the fact that the parties to that litigation had stipulated to the validity of the procedure under § 195, and therefore had neither briefed nor argued that issue. App. 18a-20a.

The district court defined the term "sampling," as used in § 195, as "the technique of determining the traits of the entire population by collecting and analyzing data" from a *randomly* drawn, representative sample of that population. App. 20a. In other words, the district court defined the word "sample" as a "'subset of units from a larger population'" selected in such a way "'each unit of th[at] population has a known chance of selection.'" *Id.* at 19a (quoting *Orr*). The court further reasoned, without citing any authority, that "sampling is a statistical methodology utilized at the data collection stage" of statistical sampling, "while imputation is a distinct statistical methodology utilized at the data processing stage." *Id.* at 21a. Thus, the district court concluded that the Bureau's use of hot-deck imputation in the 2000 census did not implicate § 195's prohibition against the use of sampling. *Id.*

The district court also rejected Utah's claims under the Census Clause. It reasoned that some "imputation must take place by practical necessity, whether it is the imputation of statistically plausible values for the missing data or the imputation of zero." App. 25a. The court further reasoned that the "latter approach appears clearly inconsistent with the constitutional imperative of an actual enumeration." *Id.* Dismissing Utah's constitutional claim as an "effort to ascribe some exalted meaning to 'actual enumeration,'" *id.*, the

district court concluded that the "constitutional requirement of an enumerative census was simply to distinguish that process from the conjectural apportionment of the first Congress." *Id.* at 26a.

The district court acknowledged that "Justice Scalia and the three justices joining his separate opinion in *House of Representatives* seemed to opine that the use of 'estimation techniques' in conducting the decennial census would violate the Census Clause." App. 26a. The court nevertheless concluded that, in its view, "the Constitution does not prohibit the use of narrowly tailored statistical methodologies, such as hot-deck imputation, for the purpose of improving the accuracy of the decennial census and furthering 'the constitutional goal of equal representation.'" *Id.* at 26a-27a (quoting *Franklin* v. *Massachusetts*, 505 U.S. 788, 804 (1992)).

Judge Greene dissented. He concluded that the Bureau's use of hot-deck imputation, in both substance and effect, constitutes sampling under § 195, as interpreted by this Court in *House of Representatives*. See App. 28a-34a. He noted that the Bureau has previously defined sampling as occurring "'whenever the information on a portion of the population is used to infer information on the population as a whole.'" *Id.* at 30a. Judge Greene found imputation to be "indistinguishable" from the type of sampling at issue in *House of Representatives* "because both use a portion of the population to infer information concerning segments of the population in order to arrive at final figures concerning the population as a whole." *Id.* at 33a. Accordingly, he concluded that the Bureau's use of hot-deck imputation violates § 195 of the Census Act. *Id.* And he therefore found it unnecessary to reach the constitutional question. *Id.* at 28a.

Utah filed a timely notice of appeal on November 5, 2001. App. 35a-36a.

THE QUESTIONS PRESENTED ARE SUBSTANTIAL

This Court has consistently granted plenary review of decisions of three-judge courts involving the legality of the methodologies employed by the Census Bureau in conducting the apportionment count. See, *e.g.*, *Department of Commerce* v. *United States House of Representatives*, 525 U.S. 316, 328 (1999); *United States Dep't of Commerce* v. *Montana*, 503 U.S. 442, 445 (1992); *Franklin* v. *Massachusetts*, 505 U.S. 788, 791 (1992). The questions presented here are of similar legal and practical significance, and surely are sufficiently substantial to warrant this Court's plenary consideration.

As a practical matter, the Bureau's policy and the decision below mean that Utah's representation in the House of Representatives has been improperly reduced by 25%, and its representation in the Electoral College diluted by roughly 17%. Thus, if the decision below stands, Utah and its approximately 2 million residents will be seriously under-represented in both of these bodies for the next decade.

The district court's decision upholding this result resolves significant legal issues left open by this Court's earlier decision in *House of Representatives*. Those issues warrant plenary consideration by this Court.

As a result of that decision, for example, and as explained in Section I below, the Bureau is now authorized to supplement the apportionment count with estimates obtained through statistical procedures, including procedures that draw inferences from observed segments or "samples" of a particular population to unobserved segments of the same population. That result cannot be reconciled with this Court's clear holding in *House of Representatives* that the Census Act bars the use of statistical sampling techniques in the apportionment of Representatives.

As discussed in Section II, another troubling feature of the decision below is its loose construction of the Census Clause's mandate that congressional representation be

apportioned among the States pursuant to an "actual enumeration" of the population. App. 25a-26a. Under the lower court's decision, the Bureau is free to supplement, or even substitute, the person-by-person count contemplated by the Constitution with mere estimates. The use of such estimates in the apportionment count is offensive to the plain language of the Census Clause, and leaves the census vulnerable to the "possibility of partisan manipulation." *House of Representatives*, 525 U.S. at 348-49 (Scalia, J., concurring).

I. THIS CASE PRESENTS SUBSTANTIAL QUESTIONS REGARDING THE PROPER APPLICATION OF THE CENSUS ACT'S BAN ON "STATISTICAL SAMPLING" IN THE WAKE OF THE *HOUSE OF REPRESENTATIVES* DECISION.

In concluding that the Bureau's use of hot-deck imputation does not run afoul of the Census Act as construed in *House of Representatives*, the district court tersely concluded that "statistical sampling and imputation are separate statistical methodologies" and that they "were viewed as such at the time of the enactment of § 195." App. 18a. As shown below, however, and as Judge Greene recognized in his dissent, the two procedures are indistinguishable under the plain language of that provision and under this Court's analysis of that language. Moreover, none of the three supposed distinctions advanced by the Bureau and accepted by the majority holds any water. Thus, the majority's approach—and the Bureau's own actions—can only be viewed as an attempt to circumvent this Court's decision in *House of Representatives*.

1. As Judge Greene pointed out, hot-deck imputation and the method of random sampling struck down by this Court in *House of Representatives* are substantively indistinguishable. See App. 29a-33a. Using the random sampling plan invalidated in *House of Representatives*, the Bureau would have limited its non-response follow-up efforts to a randomly selected subset or "sample" of all housing units in each

"census tract" whose occupants had not completed a census questionnaire. See 525 U.S. at 324. After visiting and enumerating each unit selected for inclusion in the non-response follow-up process, the Bureau would have used information gathered from the "sampled" units in each tract to "estimate the [occupancy] characteristics [of each] of the remaining non-responding units in the same tract for which it had no information. *Id.* at 324-25.

Indeed, although the Bureau had not yet settled on a precise methodology for deriving those estimates at the time this Court issued its ruling in *House of Representatives*, the Bureau's own documents indicate that it intended to use the same "nearest-neighbor" approach utilized in the hot-deck imputation method at issue here. Thus, the Bureau would have assumed that each non-sampled unit had the same occupancy characteristics as its geographically closest sampled neighbor or "donor." See Fay, *supra* at 113-14, 116 (AR at C01647-C01656). The Bureau planned to use this random sampling technique to estimate roughly 10% of the population. SUF ¶ 27.

Similarly, the Bureau here used hot-deck imputation to estimate the occupancy characteristics of housing units whose occupants failed to complete a census questionnaire and were not enumerated during the non-response follow-up process. Specifically, the Bureau assumed that each estimated unit had the same occupancy characteristics as a "donor" household, which was generally the nearest household whose occupants had been enumerated during the non-response follow-up process.

The donor housing units used in hot-deck imputation—which supplied 0.4% of the population data included in the apportionment count—were sampled in a "non-random" manner in that they were not selected "'from a larger population in such a way that each unit of the population ha[d] a known chance of selection.'" App. 19a (quoting *Orr*). Instead, those units were selected solely by virtue of (a) the

fact that—for whatever reason—census enumerators were able to enumerate their occupants during the non-response follow-up process, and (b) their relative proximity to units whose occupants the Bureau failed to enumerate, even after as many as six attempts.

Thus, the Bureau's hot-deck imputation procedure differed from the sampling proposal struck down in *House of Representatives* only in that the former (1) produced estimates on a smaller scale and (2) selected "donor" or sampled units in a non-random fashion. Neither of these distinctions, however, supports the district court's conclusion that hot-deck imputation is not a form of "sampling" under § 195.

2. The first distinction is legally insignificant, especially in light of this Court's decision in *House of Representatives*. There, the Court expressly held that the extent of the Bureau's reliance on statistical sampling has no bearing on its statutory viability under § 195. See 525 U.S. at 342 (holding that "[w]hether used as a 'supplement' or as a 'substitute,'" sampling cannot be used in determining the apportionment count). Thus, the district court's apparent reliance upon the fact that the sampling method at issue here is, in its view, more "narrowly tailored" than the method at issue in *House of Representatives*, App. 26a, was plainly misplaced.

Moreover, such a distinction would give the Bureau the ability to evade the principles laid down in that decision. If, for example, the Bureau can get away with using statistical sampling to estimate 0.4% of the population here, there is no principled reason why the Bureau could not use sampling to estimate increasingly larger percentages of the population in future censuses. Moreover, the district court's conclusion inevitably will give rise to difficult line-drawing problems and spawn extensive litigation over whether future uses of imputation are "narrowly tailored" enough to satisfy the Census Act. This Court should grant plenary review both to prevent these problems and to reiterate what it held in *House*

of Representatives, namely, that § 195 prohibits all sampling, regardless of the precise extent of its use by the Bureau.

3. The next distinction offered by the district court—*i.e.*, that the sampled units were selected in a non-random fashion—is likewise irrelevant under the plain language of § 195. Indeed, that distinction amounts to a holding that § 195 prohibits only "random" sampling, but not "non-random" sampling. That is not the law.

First, the relevant statutory language is utterly void of any suggestion that the term "sampling," as used in § 195, refers only to "random sampling." The Census Act prohibits the Bureau—without qualification, and in no uncertain terms—from using "the statistical method known as 'sampling'" in conducting the apportionment count. 13 U.S.C. § 195.

Moreover, the Bureau's own documents explain that "'sampling' occurs" not only in the context of random sampling, but "*whenever* the information on a portion of a population is used to infer information on the population as a whole." See Bureau of the Census, *Report to Congress—The Plan for Census 2000*, at 23 (Aug. 1997) ("*2000 Census Report*") (AR at C00155) (emphasis added); see also *id.* (describing the Bureau's hot-deck imputation procedure directly under a subheading entitled "Reliance on Sampling in Previous Censuses"). Thus, the term "sampling" refers to the two-step process of (1) collecting data from an observed segment or "sample" of a particular population, and (2) processing that data to make assumptions about unobserved segments of the same population. See SUF ¶¶ 24-25. Section 195 contains no language suggesting that Congress intended to enact a more limited prohibition than the above definitions would indicate. If Congress had intended to limit the Census Act's prohibition on sampling to "random" methods, surely it would have so qualified the statutory term.

Accordingly, the district court's construction of the Act squarely contradicts the familiar rule that, when Congress

uses a particular term of art, but does not narrow its operative meaning by inserting a limiting clause or term, courts are without authority to amend the statute by inserting the limiting language themselves. See, *e.g.*, *EEOC* v. *Arabian Amer. Oil Co.*, 499 U.S. 244, 255 (1991) (rejecting an argument that the term "employer," as used in Title VII, "means only, 'American employer'"). Under that principle, § 195 cannot be construed to prohibit the use of random sampling, but not other forms of sampling.

Second, the district court's construction of the statute would authorize the Bureau to circumvent this Court's ruling in *House of Representatives* by making insignificant adjustments to the procedure invalidated in that case. Specifically, if hot-deck imputation were upheld on the ground that § 195 prohibits only random sampling, the Bureau could easily modify the proposal at issue in that case to enumerate only 90% of the population while using non-random statistical methods to estimate the remainder. By devoting fewer resources to the non-response follow-up process (*e.g.*, making only one follow-up visit instead of the six visits it made in the 2000 census), the Bureau could predictably expand its use of hot-deck imputation to estimate increasingly larger portions of the population in the decennial census—up to and even exceeding the 10% it planned to estimate using the procedure invalidated in *House of Representatives*. See SUF ¶¶ 39-43; DOJ Mem. at 20. Under the district court's analysis, this approach (which would be substantively indistinguishable from the method struck down by this Court) would survive under the statute simply because the donor households would be selected in a non-random fashion.

The Census Act cannot be read to permit such an absurd result. Congress could not have intended to permit estimation of the apportionment count by non-random sampling but not

by random sampling, particularly where non-random sampling is, if anything, a *less* reliable method of estimation.[4]

Third, the district court's conclusion that § 195 prohibits only random sampling is inimical to the statute's underlying purpose, *i.e.*, protecting the decennial census from the risk of manipulation. See *FEC* v. *Democratic Senatorial Campaign Comm.*, 454 U.S. 27, 32 (1981) (courts "must reject administrative constructions of [a] statute . . . that are inconsistent with the statutory mandate or that frustrate the policy that Congress sought to implement"). As Utah demonstrated below, the use of hot-deck imputation provides the Bureau with extensive opportunities to manipulate the census and its resulting apportionment. See SUF ¶¶ 39-43.

For example, the unrefuted evidence shows that, if non-random sampling is generally allowed, the Bureau could easily alter the impact and extent of hot-deck imputation by substituting a different statistical algorithm for the "nearest neighbor" method currently employed, by reducing the resources it dedicates to the non-response follow-up process, or by changing the procedures for adding or removing addresses from the Master Address File. See *id.* Congress could not have intended to leave open such extensive opportunities for manipulation. This Court should grant plenary review to make this clear, and to prevent the Bureau and the lower courts from improperly limiting the statutory

[4] Both forms of sampling rely on the assumption that non-responding housing units are "similar" to neighboring donor units used to estimate their occupancy characteristics. That assumption was arguably defensible under the Bureau's random sampling procedure because the donor units were distributed randomly among all non-respondents. The donor units used in hot-deck imputation, by contrast, are demonstrably different from the estimated units in that the Bureau was able to enumerate the former, but not the latter, during the non-response follow-up process. Thus, hot-deck imputation is less reliable than random sampling in that a randomly sampled unit is likely representative of an unobserved, estimated unit, but a non-randomly sampled unit is not. *See* SUF ¶¶ 33-35.

prohibition upheld in *House of Representatives* to random sampling.

4. Finally, the district court, at the Bureau's urging, suggested that the term "sampling" in § 195 refers only to activities carried out during "the data collection stage" of sampling, not those carried out at the "data processing stage." App. 19a, 21a. That supposed distinction relies on a mere linguistic coincidence, however, and finds no basis in the text of the statute or in *House of Representatives*.

As explained above, the term "statistical sampling" refers to a two-step process that "'occurs whenever [1] the information on a portion of a population is [2] used to infer information' about unobserved portions of the same population." SUF ¶ 24 (quoting *2000 Census Report* at 23 (AR at C00155)). In the first step, which is sometimes described as "sampling," statisticians collect data by observing a component or "sample" of the population. See SUF ¶ 25; see also Pls.' Reply Mem. in Supp. of Summ. J. at 32, *Utah* v. *Evans*, No. 2:01-CV-292G (D. Utah filed July 25, 2001) ("Utah Reply"). In the second step, referred to as "estimation" or sometimes "imputation," statisticians use data gathered from the sample to draw conclusions about unobserved components of the population. See SUF ¶ 25; Utah Reply at 32.

Relying on the semantic coincidence that the first step of data collection is sometimes referred to as "sampling," and the second step is occasionally described as "imputation," the district court hastily concluded that the two concepts are entirely separate and "operate at completely different levels and entirely independent of each other." App. 21a. But that analysis is logically untenable. Although "imputation" as a statistical term of art may refer to the "data processing stage" of the process of deriving a statistical estimate, the term "imputation" as used by the Bureau here clearly refers to the "hot-deck" method of collecting the data on "donor" units that will then be used to estimate the occupancy

characteristics of unenumerated housing units. Thus, the district court's analysis on this point relies on a linguistic trick—one that incorrectly attempts to characterize "imputation" as involving only data processing and not data collection.

In fact, both data collection and data processing are necessarily present in both the hot-deck method employed in the 2000 census and in the random sampling proposal invalidated in *House of Representatives*. Under the latter procedure, the Bureau planned to (1) *collect* data from a sample or "donor," and (2) *process* that data in order to make a conclusion (based on data drawn from the relevant donor) about the occupancy and/or existence of a nearby non-responding household in the same tract that was not selected for inclusion in the non-response follow-up process. See 525 U.S. at 324.

The hot-deck procedure used in the 2000 census involves the same two steps. See SUF ¶¶ 24-26. Using hot-deck imputation, the Bureau (1) collected data from an individual donor household, and (2) processed that data in order to make a conclusion, based on data obtained from that donor, about the occupancy and/or existence of a nearby non-respondent that was not counted during the non-response follow-up process. As explained previously, the only qualitative difference between the two procedures is that they rely on different mechanisms for selecting donor households.

Accordingly, the district court's assumption that the "sampling" prohibited by § 195 is limited to methods of "data collection" is nonsensical, and in any event implicates equally the hot-deck method employed in the 2000 census. Indeed, it is impossible to imagine a method of "sampling" relevant to an assessment of the population that would not involve both steps.

The district court's reliance on this illusory linguistic distinction would thus effectively nullify both § 195 and this

Court's decision in *House of Representatives*. The decision below therefore warrants full review by this Court.

II. THIS CASE PRESENTS SUBSTANTIAL QUESTIONS REGARDING THE APPLICATION OF THE CENSUS CLAUSE'S REQUIREMENT OF AN "ACTUAL ENUMERATION."

The decision below warrants plenary review by this Court for the additional reason that it fails adequately to address critical constitutional questions implicated by the Bureau's use of hot-deck imputation. As four members of this Court observed in *House of Representatives*, the Census Clause's requirement that congressional apportionment be based on an "actual Enumeration" may be read to prohibit the use of sampling, or any other method of estimation, in the decennial census. See 525 U.S. at 346-47 (Scalia, J., concurring, joined by Rehnquist, C.J., Kennedy, J., and Thomas, J.) (concluding that there are grave constitutional doubts as to whether the Bureau's use of sampling is consistent with the constitutional requirement of an "actual Enumeration."). The Framers eschewed estimation techniques in favor of the requirement of an "actual enumeration" to avoid giving "the party controlling Congress the power to distort representation in its own favor" by selecting "among various estimation techniques having credible (or even incredible) 'expert' support." *Id.* at 348 (Scalia, J., concurring). Actual enumeration, in other words, "may not be the most accurate way of determining population, but it may be the most accurate way of determining population with minimal possibility of partisan manipulation." *Id.* at 348-49 (Scalia, J., concurring).

In sustaining the Bureau's use of hot-deck imputation, the district court disregarded the plain language of the Census Clause, incorrectly assumed that that language could be ignored because of the manner in which it was added to the Constitution, adopted a logically flawed standard that would spawn endless litigation, and disregarded a wealth of historical evidence. Accordingly, the district court's analysis

under the Census Clause cannot withstand review and warrants full review by this Court.

1. First, the district court made no effort to reconcile the Bureau's use of hot-deck imputation with the applicable constitutional language. Nor could it have done so. There simply is no plausible understanding of the term "actual Enumeration" that would permit the apportionment of Representatives to be calculated by reference to estimates derived through the use of statistical procedures.

As Justice Scalia pointed out in his concurring opinion in *House of Representatives*, dictionaries contemporaneous with the ratification of the Constitution reveal that "an 'enumeration' requires an actual counting, and not just an estimation of number." *Id.* at 346-47 (Scalia, J., concurring). That definition suggests that the Census Clause prohibits the use of any procedure that, like hot-deck imputation, does not involve an individualized reckoning of the population—one in which each person is identified on the basis of information provided by someone with actual knowledge of that person's existence.

The district court's conclusion to the contrary ignores the plain language of the Census Clause. Significantly, neither the district court nor the appellees have ever offered *any* interpretation of the term "actual Enumeration" that would sanction the use of statistical methods for estimating unobserved segments of the population.

In fact, the Bureau itself has recognized that "[t]he term 'actual Enumeration'" refers specifically to "a census or a headcount," and—as used in the Census Clause—prohibits the use of estimates in the apportionment count. Census Undercount Adjustment: Basis for Decision, 45 Fed. Reg. 69,366, 69,371 (Oct. 20, 1980) (AR at C01212-C01222).[5]

[5] According to the Bureau's earlier statements, a "'census' is an official enumeration of the inhabitants with details of sex, age, family, etc., and the public record thereof; it is not merely a sum total, *but an official list containing the names of all the inhabitants* . . . . A 'census' is not an estimate of the population." *Union Elec. Co.* v. *Cuivre River Elec. Coop., Inc.*, 571 S.W.2d 790, 794 (Mo. Ct. App. 1978) (emphasis added and citations omitted), *quoted* by the Bureau in Census Undercount Adjustment, 45 Fed. Reg. at 69,371 (AR at C01218). Accordingly, the Bureau publicly responded to suggestions that it use statistical methods in the apportionment count by pointing out that "the framers of the Constitution drew a clear distinction between an 'actual Enumeration' and an estimate, regardless of its underlying methods." Census Undercount Adjustment, 45 Fed. Reg. at 69,372 (AR at C01219). The Bureau therefore firmly rejected "estimates based on *sampling or other statistical procedures, no matter how sophisticated.*" *Id.* (emphasis added).

The Bureau later departed from this view when it decided for the first time to use the random sampling methodology that was struck down in *House of Representatives*. Even then, however, the Bureau told the three-judge district court in that case that "*no constitutional* difference exists between sampling and the [hot-deck] imputation methodology." Defs.' Mem. in Opp. to the House's Mot. for Summ. J., at 27 n.20 *United States House of Representatives* v. *United States Department of Commerce*, No. 98-456 (D.D.C. filed May 4, 1998) (emphasis in original). The district court failed even to acknowledge the Bureau's prior construction of the Census Clause, much less articulate any textual basis for its rejection of that construction, or for its rejection of the construction adopted by four members of this Court in *House of Representatives*.

2. Instead, the district court reasoned that the term "actual Enumeration" can be disregarded because it was "added [to the Constitution] by the Committee of Style and Arrangement, a committee which," according to the district court, "did not operate to alter the substance of any of the resolutions passed by the Constitutional Convention." App. 26a. But the district court's analysis on this point has been soundly rejected by this Court. In *Nixon* v. *United States*, 506 U.S. 224 (1993), the petitioner argued that a particular term in

the Impeachments Trial Clause lacked substantive meaning because it was a "'cosmetic edit' added by the Committee of Style after the delegates had approved the substance of the . . . Clause." *Id.* at 231. This Court rejected this argument for two reasons.

First, the Court explained that, because "the Committee of Style had no authority from the Convention to alter the meaning of" the Constitution, the Court "must presume that the Committee's reorganization or rephrasing accurately captured what the Framers meant in their unadorned language," and in short, "must presume that the Committee did its job." *Id.* (citing 2 *Records of the Federal Convention of 1787*, at 553 (M. Farrand ed., 1966), and *Powell* v. *McCormack*, 395 U.S. 486, 538-39 (1969)). As the Court went on to explain, "[t]his presumption is buttressed by the fact that the Constitutional Convention voted on, and accepted, the Committee of Style's linguistic version," and that language added by the Committee of Style is therefore "entitled to no less weight than any other word of the text, because the Committee revision perfected what had been agreed to." *Id.* (citing 2 Farrand, *supra*, at 663-667) (internal quotations omitted).

Second, the Court noted that carrying this "argument to its logical conclusion would constrain us to say that the second to last draft would govern in every instance where the Committee of Style added an arguably substantive word." *Id.* at 231-32 (emphasis omitted). "Such a result," the Court continued, would be "at odds with the fact that the Convention passed the Committee's version, and with the well-established rule that the plain language of the enacted text is the best indicator of intent." *Id.* at 232. The district court's analysis on this point was therefore erroneous, and warrants plenary review.

3. Similarly indefensible was the district court's casual suggestion that the term "actual Enumeration" represents nothing more than a desire on the part of the Framers to

proscribe the type of "conjectural apportionment" which—like the formula used to determine the composition of the first Congress—is "based on the grossest of estimates." App. 26a. Thus, according to the district court, as long as a particular statistical procedure is "narrowly tailored," and can be shown to "improve the accuracy of the census count," *id.*, the Bureau's decision to use that procedure passes constitutional muster.

The district court did not articulate any historical or textual basis for this sweeping proposition. Instead, it merely concluded that, because "some type of imputation must take place by practical necessity, whether it is the imputation of statistically plausible values . . . or the imputation of zero," the Census Clause must be read to allow the Bureau to use any procedure that may—in the Bureau's own judgment—improve the accuracy of the apportionment count. See App. 25a. For at least two reasons, that analysis cannot withstand review and merits plenary consideration by this Court.

First, the district court's analysis on this point rests on the premise that a failure to count a person who cannot be identified through an actual enumeration is legally and logically tantamount to a refusal to count that person. That premise is both illogical and contrary to the constitutional text. By requiring an "actual Enumeration," the Census Clause necessarily assumes that all persons who cannot be "enumerated" will be *excluded* from the apportionment count. Exclusion of those persons therefore does not imply that they are "imputed" out of existence. It simply means that, for whatever reason, they could not be "enumerated" and therefore could not be included in the apportionment count. *Inclusion* of those same persons, on the other hand, would run afoul of the express constitutional command explained above, and cannot be deemed to be equivalent to excluding people who cannot be identified.

Second, if affirmed by this Court, the district court's opinion would inevitably embroil the courts in an endless

series of inquiries into which estimation procedures are sufficiently accurate to pass constitutional muster, and which are likely to result in the type of "conjectural apportionment" described as unacceptable by the district court. App. 26a. This Court should note probable jurisdiction to resolve the uncertainty created by the district court's opinion, and thereby forestall the chaos that may result from that opinion. See *House of Representatives*, 525 U.S. at 349 (Scalia, J. concurring) ("The prospect of this Court's reviewing estimation techniques in the future, to determine which of them so obviously creates a distortion that it cannot be allowed, is not a happy one.") (emphasis omitted).

4. Finally, unrefuted historical evidence further undermines the district court's conclusion that the Census Clause prohibits only the kind of "conjectural apportionment" that results from a census "based on the grossest of estimates," and authorizes the Bureau to use any statistical procedure it deems necessary to improve the accuracy of the census. See Utah Mem. at 37-41; Utah Reply at 55-67. That evidence, which the district court declined even to address, authoritatively demonstrates two things. First, it shows that the Framers knew the difference between population counts derived from estimates and those based on a person-by-person count using first-hand data. Second, the historical evidence also demonstrates that, despite the known availability of various estimating procedures, the Framers rejected the idea of apportioning congressional representation based on any form of estimate. Accordingly, that evidence shows that the phrase "actual Enumeration" was understood (in the language of the Framers' day) to prescribe an individualized, person-by-person count of the population based on data from those with first-hand knowledge of the matters reported—notwithstanding their understanding that such an approach will inevitably result in what the district court cleverly described as "the imputation of zero." App. 25a.

a. In its submissions to the district court, Utah demonstrated that early population assessments of the American colonies can be divided into two categories: those based on an actual "enumeration" and those based on mere "estimates." See Utah Mem. at 38; Utah Reply at 56-63. And it was this distinction, not the district court's distinction between "gross[] [statistical] estimates" and more "narrowly tailored statistical methodologies," App. 26a, that was the focus of debate during the founding era.

For example, in colonial times, the populations of the various colonies were estimated and enumerated primarily as a result of inquiries from the British Board of Trade, which wished to assess the strength of the colonies for taxation and military purposes. In light of the cost and difficulty of conducting an actual enumeration, "[c]olonial governors looking for data . . . often had to resort to estimates in order to satisfy the Board of Trade." James H. Cassedy, *Demography in Early America: Beginnings of the Statistical Mind, 1600-1800*, at 72 (1969).

Contemporaneous accounts of the colonial reports to the Board of Trade drew a clear distinction between such "estimates" and a census based on an "enumeration." In his 1792 History of New Hampshire, for example, Jeremy Belknap noted the estimates and enumerations in that colony in the 1770s:

> Governor Wentworth was ordered by the British ministry to take an exact survey; but 'having no fund to pay the expense' . . . he was subjected to the inconvenience of . . . disappointment. The number of people however, in 1767, was *estimated* at 52,700. Another *estimate* was made in 1774, of which I have . . . no official account; but have been informed that it was 85,000. This was too high. The estimate given to Congress . . . at the commencement of the revolution, was still more extravagant. A survey taken in 1775, *partly by enumeration* and *partly by estimation*, for the

purpose of establishing an adequate representation of the people, made the whole number 82,200.

3 Jeremy Belknap, *The History of New-Hampshire* 233-34 (1792) (emphasis added).

This and a wealth of other evidence presented below demonstrates that Americans in the colonial era understood the difference between an individualized "enumeration" of the population and a mere "estimate." They recognized that an enumeration was expensive and inconvenient, and that an estimate could avoid such difficulties. Finally, in contravention of the district court's theory that the Framers had in mind only "gross statistical estimates" and not the use of more "narrowly tailored statistical methodologies," App. 26a, the evidence shows that Americans in the founding era understood the possibility of an assessment of population "partly by enumeration" and "partly by estimation."

The same distinction was recognized across the Atlantic in 18th-century Britain in debates that were widely followed in colonial America. Because Britain did not conduct its first census until 1801, there was ample room for debate about the size of the population and whether it was increasing or decreasing. Prior to the adoption of the U.S. Constitution, William Brakenridge, Richard Price, and Richard Forster each offered estimates of Britain's population suggesting that it was declining. These researchers based their estimates on partial enumerations and other methodologies that presaged modern sampling techniques, and they published their work to the scholarly community of the day.[6]

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[6] *See, e.g.*, William Brakenridge, *A Letter from the Reverend William Brakenridge, D.D. and F.R.S. to George Lewis Scot, Esq.; F.R.S., concerning the Number of Inhabitants within the London Bills of Mortality*, 48 Phil. Transactions II, at 788, 796 (1755); Richard Forster, *An Extract of the Register of the Parish of Great Shefford, near Lamborne, in Berkshire, for Ten Years: With Observations on the Same: In a Letter to Tho. Birch, D.D. Secret. R.S. from the Rev. Mr. Richard Forster, Rector of Great Shefford*, 50 Phil. Transactions I, at 356, 359 (1757); Richard Price, *An Essay on the Population of England, From the Revolution to the present Time* (2d ed. 1780). All of these materials are reprinted in *The Population Controversy* (D.V. Glass ed., 1973).

Critics of these assessments consistently drew a stark distinction between an "actual enumeration" of population and a mere "estimate." Arthur Young, for example, complained that Price's assessment of "the number of houses" was "not from an *actual enumeration*, (for none was ever yet made) but *calculated* from the [rolls of the] hearth tax." Arthur Young, *Reply to Dr. Price. To the Printer of the St. James Chronicle* 322, 324 (Mar. 28, 1772) (first emphasis added).[7]

All of this historical evidence confirms the conclusion of the *House of Representatives* concurrence, namely, that the generation of the Framers understood the difference between an "actual enumeration" and a mere "estimate." That evidence shows that the very phrase at the center of the

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[7] Toward the close of the 18th century (and near the time of the American Constitutional Convention), British decision makers began to accept the idea of actually enumerating the population. *See* Glass, *Numbering the People: The Eighteenth-Century population controversy and the development of census and vital statistics in Britain* 90-105 (1973) ("*Numbering the People*"). In 1800 a "Population Bill" was introduced in Parliament, calling for a full enumeration of the British population. *Id.* at 90; An Act for Taking an Account of the Population of Great Britain, and of the Increase in Diminution Thereof, 1800, 41 Geo. 3 c. 15 (Gr. Brit.). Both the parliamentary history and the text of the 1800 Act carry forward the established usage of the term "enumeration." In a speech in the House of Commons, Charles Abbot complained of the inadequacy of the existing "inquiries and estimates" of population, which—although they had been compiled by the experts of the day—rested on partial "numerations of the people," or "imperfect data." 35 *The Parliamentary History of England, from the Earliest Period to the Year 1803*, at 599, 600 (1819). To "substitute certainty for conjecture," *id.* at 600, the bill called for a complete enumeration of the "total Number of Persons within the Kingdom of Great Britain." 41 Geo. III c. 15, § 1. *See Numbering the People* at 91.

constitutional debate—"actual Enumeration"—was a term of art used to draw the very distinction at issue here. The district court was therefore wrong to suggest that the Census Clause does no more than proscribe the type of "conjectural apportionment" that would result from the use of "the grossest of estimates." App. 26a.

b. Historical evidence presented below also demonstrates that the district court was wrong to suggest that the Bureau's use of "narrowly tailored" statistical estimates can be justified under the Census Clause to the extent that they "improve the accuracy of the census." App. 26a. Indeed, that assertion flies in the face of historical evidence indicating that the Framers rejected the idea of apportioning representation on the basis of any kind of estimate, even though they realized that an "actual Enumeration" would inevitably result in an undercount of the actual population.

For example, in their correspondence discussing the returns from the first census, George Washington and Thomas Jefferson lamented the fact that the returns from the "enumeration" had fallen short of their "estimates" of the population and failed to reflect the true population. In a letter to William Short, for example, Jefferson wrote:

> I enclose you also a copy of our census, written in black ink, so far as we have *actual* returns, and supplied by *conjecture* in red ink, where we have no returns; but the conjectures are known to be very near the truth. Making very small allowance for omissions . . . we are certainly above four millions.

8 *The Writings of Thomas Jefferson* 236 (Andrew A. Lipscomb ed., 1903) (emphasis added). Washington expressed a similar sentiment in a letter to Gouverneur Morris dated July 28, 1791. After lamenting that the "enumeration" of the population would fall short of the "estimate" he had previously offered of the population of the United States, Washington said:

> Returns of the Census have already been made from several of the States and a tolerably just estimate has been formed now in others, by which it appears that we shall hardly reach four millions; but one thing is certain our *real* numbers will exceed, greatly, the official returns of them.

31 *The Writings of George Washington* 329 (John C. Fitzpatrick ed., 1931) (emphasis added). This correspondence confirms that Washington and Jefferson understood not only the distinction between an enumeration and an estimate, but also that the Constitution and the first Census Act had chosen the former over the latter.

Moreover, despite their self-proclaimed ability to provide estimates where actual enumerations were lacking, Washington and Jefferson accepted the fact that the actual enumeration had failed to provide a full account of the population and were resigned to the impropriety of supplementing the official returns by methods of estimation. Washington, for example, was as convinced as he was disappointed that the new nation's "*real* numbers [would] exceed, greatly, the official returns of them." *Id.* But although he had a practical capacity and an obvious incentive to augment the official returns with supplemental estimates (in order to better "influence" Europe to "form a more just opinion of our present and growing importance"), Washington acknowledged that he was bound by the "authenticated number" produced by the official returns of the enumeration. *Id.* Similarly, Jefferson acknowledged that the "omissions" in the enumeration had "been very great," so much so that the true population was "certainly above four millions, probably about four millions one hundred thousand." 8 Jefferson, *supra*, at 236. And while Jefferson acknowledged a practical capacity to make an "allowance" for the "omissions" in order to arrive at a more accurate measure of the population, like Washington he understood that the Constitution called for census "returns" based on an

actual enumeration, not mere "conjecture." *Id.* Thus, there can be no doubt that the Framers knew that an "actual Enumeration" would likely be less "accurate" than an enumeration supplemented by statistical estimation, but nevertheless decided to require an "actual Enumeration" of each State's population.

The same evidence demonstrates, moreover, that the Framers' decision to require an "actual enumeration" rather than an "estimate" was based, not on any misconception about the accuracy of the former over the latter, but on political considerations. As Justice Scalia noted in *House of Representatives*, the Framers wanted to minimize the risk of "partisan manipulation" by the federal government, and they recognized that an actual enumeration would be less vulnerable to manipulation than an estimate. 525 U.S. at 349.

Thus, for this reason as well, the district was incorrect in concluding that the Constitution tolerates the use of "narrowly tailored statistical methodologies" as long as they "improve the accuracy of the census." This Court should note probable jurisdiction to review that incorrect conclusion, and to establish once and for all that the Census Clause requires apportionment to be based only on an "actual enumeration" rather than a method that is part enumeration and part estimation.

CONCLUSION

For the foregoing reasons, the Court should note probable jurisdiction and reverse the judgment of the district court.

Respectfully submitted,

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APPENDICES

APPENDIX A

IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF UTAH, CENTRAL DIVISION

[Filed Nov. 1, 2001]

No. 2:01CV292G

STATE OF UTAH; MICHAEL O. LEAVITT, Governor; OLENE S. WALKER, Lieutenant Governor; MARK L. SHURTLEFF, Utah Attorney General; L. ALMA MANSELL, President of the Utah Senate; MARTIN R. STEPHENS, Speaker of the Utah House; MIKE DMITRICH, Utah Senate Minority Leader; RALPH BECKER, Utah House Minority Leader; ORRIN G. HATCH, United States Senator; ROBERT F. BENNETT, United States Senator; JAMES V. HANSEN, Member of Congress; CHRISTOPHER B. CANNON, Member of Congress; JAMES MATHESON, Member of Congress; BLAKE J. RUSSON; MICHAEL WAYNE ANDERSON; BRENT MCGHIE; JEAN MCGHIE,

Plaintiffs,

v.

DONALD L. EVANS, Secretary of Commerce; WILLIAM G. BARRON, Director, United States Census Bureau,

Defendants,

STATE OF NORTH CAROLINA; MICHAEL F. EASLEY, Governor; BEVERLY PERDUE, Lieutenant Governor; ROY COOPER, North Carolina Attorney General; MARC BASNIGHT, President Pro Tempore of the North Carolina Senate; JAMES BLACK, Speaker of the North Carolina House; PATRICK BALLENTINE, North Carolina Senate Minority Leader; LEO DAUGHTRY, North Carolina House Minority Leader; JESSE HELMS, United States Senator; JOHN EDWARDS, United States Senator; EVA M. CLAYTON,

Member of Congress; BOB ETHERIDGE, Member of Congress; WALTER B. JONES, Member of Congress; DAVID PRICE, Member of Congress; RICHARD BURR, Member of Congress; J. HOWARD COBLE, Member of Congress; MIKE MCINTYRE, Member of Congress; ROBIN HAYES, Member of Congress; SUE MYRICK, Member of Congress; T. CASS BALLENGER, Member of Congress; CHARLES H. TAYLOR, Member of Congress; MELVIN L. WATT, Member of Congress,

Intervenors.

MEMORANDUM OPINION

Before MICHAEL R. MURPHY, *Circuit Judge*, DALE A. KIMBALL, *United States District Judge*, and J. THOMAS GREENE, *Senior United States District Judge*.

MURPHY, *Circuit Judge*.

The State of Utah and numerous elected Utah officials ("Plaintiffs") bring this suit against the Secretary of Commerce and the Acting Director of the Census Bureau ("Defendants") seeking injunctive and declaratory relief. Plaintiffs contend that Defendants' use of a statistical method known as "hot deck imputation" during the 2000 decennial census violated various statutory provisions and the Constitution. Furthermore, Plaintiffs allege that had the Census Bureau not supplemented the apportionment count by hot deck imputation, "Utah would have been entitled to 4 seats in the United States House of Representatives beginning in 2003, North Carolina would have been entitled to 12 seats, and no other state's apportionment would have been affected." The State of North Carolina and several of its elected officials ("Intervenors") have intervened as party defendants in this action.

This three-judge panel of the United States District Court for the District of Utah was convened pursuant to Plaintiffs' request under 28 U.S.C. § 2284. Plaintiffs have filed a

motion for summary judgment. Defendants and Intervenors have each filed a motion designated as a motion to dismiss or, in the alternative, cross-motion for summary judgment. All parties have filed responses to the competing motions for summary judgment and/or dismissal and Defendants have filed the administrative record.

This court may grant summary judgment "if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law." Fed. R. Civ. P. 56(c). For the reasons set out below, this court grants Defendants' and Intervenors' cross-motions for summary judgment, and denies Plaintiffs' motion for summary judgment.

I. BACKGROUND [1]

This is the second complaint filed by Plaintiffs challenging the methods employed by Defendants in conducting the 2000 decennial census. In a prior complaint, Plaintiffs alleged that Defendants violated numerous statutory provisions and the Constitution when they refused to count in the 2000 census LDS missionaries serving missions abroad, while, at the same time, enumerating federal employees working abroad. *See Utah v. Evans*, 143 F. Supp. 2d 1290, 1293 (D. Utah 2001) (*Evans I*).[2] A three-judge panel of this court granted sum-

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[1] The facts recited in this portion of the court's opinion are undisputed by the parties.

[2] Plaintiffs attempted to raise the claims which are the subject of the instant complaint before the three-judge court in *Evans I* by filing a Motion for Leave to File a Third Amended Complaint. In denying Plaintiffs' motion, the *Evans I* court noted that Plaintiffs were aware on January 10, 2001, the time of the filing of their original complaint, of the Census Bureau's practice of imputing certain figures for purposes of actually enumerating the population of the states. The court further noted that Plaintiffs had "continually represented . . . that an expedited decision

mary judgment in favor of Defendants and Intervenors on the claims raised in the earlier complaint, concluding as follows: (1) Plaintiffs lacked statutory standing to bring their challenge under the Administrative Procedures Act ("APA"); (2) Plaintiffs failed to come forward with any evidence that the decision not to enumerate missionaries serving outside of the country burdened the missionaries' religious beliefs or practices; (3) the decision to enumerate federal employees working outside of the country, in combination with the failure to enumerate missionaries serving outside of the country, did not violate either the Census Act or the Constitution. *See id.* at 1296, 1297, 1299, 1301. In so ruling, the prior three-judge panel set forth the following useful synopsis of the workings of the decennial census:

> The decennial Census is conducted pursuant to the requirement imposed by Article I of the United States Constitution and the Fourteenth Amendment that seats in the United States House of Representatives be "apportioned among the several States according to their respective numbers, counting the whole number of persons in each State." U.S. Const. amend. XIV, § 2; U.S. Const. art. I, § 2, cl. 3. The "counting" of the "number of persons in each State" is accomplished by "actual Enumeration," conducted every ten years, "in such Manner as [Congress] shall by Law direct." U.S. Const. art. I, § 2, cl. 3; *Franklin v. Massachusetts*, 505 U.S. 788, 791, 112 S. Ct. 2767, 120 L. Ed.2d 636 (1992).
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> Congress, by means of the Census Act, 13 U.S.C. §§ 1-196, has delegated to the Secretary of the Department of Commerce the responsibility to "take a decen-

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was imperative" and that "the Second Amended Complaint covered and represented plaintiffs' position." Accordingly, the *Evans I* court concluded that Plaintiffs' motion to file their Third Amended Complaint should be denied on the basis of undue delay.

> nial census of population . . . in such form and content as he may determine." 13 U.S.C. § 141(a). The Secretary is assisted in that endeavor by the Director of the Census Bureau who "shall perform such duties as may be imposed upon him by law, regulations, or orders of the Secretary." 13 U.S.C. § 21. The Supreme Court has acknowledged that "the text of the Constitution vests Congress with *virtually unlimited discretion* in conducting the decennial" Census and such wide discretion commands extraordinary deference. *Wisconsin v. City of New York*, 517 U.S. 1, 19, 116 S. Ct. 1091, 134 L. Ed.2d 167 (1996) (emphasis added). Thus, the Secretary's conduct of the Census must "bear only a reasonable relationship to the accomplishment of an actual enumeration of the population, keeping in mind the constitutional purpose of the census." *Id.* at 20, 116 S. Ct. 1091; *see also United States Dep't of Commerce v. Montana*, 503 U.S. 442, 464, 112 S. Ct. 1415, 118 L. Ed.2d 87 (1992) (noting that Congress's "apparently good-faith choice of a method of apportionment of Representatives among the several States 'according to their respective Numbers' commands far more deference" than state districting decisions).
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> Under the Census Act, "[t]he tabulation of total population by States . . . as required for the apportionment of Representatives in Congress . . . shall be completed within 9 months after the census date and reported by the Secretary to the President of the United States." 13 U.S.C. § 141(b). Upon receipt of the Secretary's report, the President:
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> > shall transmit to the Congress a statement showing the whole number of persons in each State . . . as ascertained under the . . . decennial census of the population, and the number of Representatives to which each State would be entitled under an appor-

> tionment of the then existing number of Representatives by the method known as the method of equal proportions.
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> 2 U.S.C. § 2a(a). The Clerk of the House of Representatives then sends to "the executive of each State a certificate of the number of Representatives to which such State is entitled." 2 U.S.C. § 2a(b). With respect to Census 2000, the Secretary of Commerce delivered the Census 2000 data to the President on December 28, 2000, and the President, in turn, transmitted the counts to the Clerk of the House of Representatives on January 4, 2001. The Clerk notified Utah of its number of representatives on January 16, 2001.

Id. at 1293-94.

In an attempt to obtain a completed census questionnaire from every housing unit for the 2000 census, the Census Bureau developed a Decennial Master Address File ("DMAF") which contained the mailing address, street address, and census block location of every housing unit in the United States. The DMAF contains both "city-style addresses" and "non-city-style addresses." A primary source of city-style addresses was the United States Postal Service. A second primary source of city-style addresses was the address list compiled during the 1990 census. Units of local and tribal governments also assisted by reviewing the addresses in the DMAF to confirm the existence of the units and to provide additional addresses that might have been missing from the address list. The non-city-style addresses were obtained through a systematic field operation in which Census Bureau staff visited each living quarters in an assigned area to obtain the occupant's name and mailing address. The areas were revisited twice and a Census 2000 questionnaire was left at each living quarters.

For the 2000 census, there were three basic data collection methods: (1) mailout/mailback (Postal Service delivered questionnaires to the vast majority of housing units with city-style addresses); (2) update/leave (in areas with predominantly non-city-style addresses, enumerators left addressed census questionnaires at each housing unit); and (3) list/enumerate (in very remote areas, enumerators visited each housing unit and completed a short or long census questionnaire).[3] The Census Bureau made numerous attempts to obtain census information from non-responding housing units. For the non-responding housing units that ultimately could not be contacted, imputation was used.

In the 2000 census, imputation was used to complete the population count when the following situations were presented: (1) occupied units with no population count ("household size imputation"); (2) existing units whose occupied or vacant status was unknown ("occupancy imputation"); and (3) unclassified units for which nothing was known—occupied, vacant, or nonexistent status ("status imputation"). The third category included units which at some point in time were reported to exist and therefore appeared in the DMAF. With status imputation, the process resulted in units either being deleted from the DMAF, imputed as vacant, or imputed as occupied. If imputed as occupied, the number of inhabitants also was imputed.

The national percentage of imputed individuals in the 2000 census amounted to 0.4% of the total population. The distribution of the housing units for which imputation was used is as follows: 56.2% of the units were imputed as occupied, 34.2% imputed as vacant, and 9.6% imputed as

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[3] Several additional data collection methods were employed to improve coverage in difficult-to-enumerate areas and to enumerate "special populations," such as military personnel, persons living in a group home, and homeless persons or persons otherwise without a fixed residence.

nonexistent and therefore deleted from the DMAF.[4] In North Carolina and Utah, 0.4% and 0.2% of the populations were imputed respectively.

The Census Bureau used an imputation process called a hot deck method.[5] Hot decks are distributions of values that are constantly altered as questionnaires are processed. Using this method, imputation of a missing entry was made from the last value (the last person or housing unit) stored in the matrix that fit other known characteristics of the person or housing unit. Typically, the records from a nearby, fully-enumerated household of the same size were duplicated. Donor households supplying the characteristics or counts imputed were restricted to those requiring field follow-up. If possible, both the donor and the donee, the address to which the characteristics and counts were imputed, shared the characteristic of a single-unit structure or multi-unit structure.

Although imputation was used in the 1940 and 1950 censuses to determine characteristics of the population, it was not used to determine the actual population count for apportionment purposes until 1960. In 1980, the Census Bureau's use of count imputation shifted one congressional seat from Indiana to Florida. *See Orr v. Baldrige*, No. IP-81-604-C, slip. op. (D. Ind. July l, l985). Indiana challenged the outcome, but the district court ruled in favor of Florida. Notably, both parties agreed that imputation was not a form of sampling. No appeal was taken from the decision in *Orr*.

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[4] This compares to the following distribution for housing units where imputation was not necessary: 87.3% were occupied, 8.4% were vacant, and 4.3% were nonexistent.

[5] The parties' memoranda refer to both "characteristic imputation" and "count imputation." Characteristic imputation involves the imputation of characteristics, such as age, gender, etc., which do not affect apportionment. Count imputation refers solely to the imputation of the population numbers, which directly affect the apportionment count.

The parties in this case agree that without the use of imputation in the 2000 census, Utah would have been entitled to a fourth congressional seat. Further, the parties agree that without the use of status imputation, Utah would have been entitled to the seat. In its filings before this court, Plaintiffs challenge both the use of imputation in general and the use of status imputation in particular.

II. JURISDICTION/JUSTICIABILITY

Plaintiffs' complaint sets forth the following three separate causes of action: (1) Defendants' use of imputation violates the APA because Defendants have failed to provide a rational basis for the use of imputation instead of "traditional methods" of enumeration, have failed to reconcile the use of imputation with 13 U.S.C. § 195, and have failed to reconcile the use of imputation with the constitutional requirement of an "actual enumeration"; (2) Defendants' utilization of imputation violates the prohibition against the use of statistical sampling for reapportionment purposes set out in section 195 of the Census Act; and (3) the use of imputation violates the constitutional requirement of an "actual enumeration." Before addressing the merits of these claims, however, this court must address potential jurisdictional deficiencies in Plaintiffs' claims whether or not posed by Defendants or Intervenors. *See Steel Co. v. Citizens for a Better Env't*, 523 U.S. 83, 93-95 (1998) (holding that federal courts must address jurisdictional issues before reaching merits).

A. Census Act and Census Clause Claims

In their reply memorandum, Intervenors assert that although this court can enter declaratory and injunctive relief prohibiting the use of imputation in the next decennial census in 2010, this court cannot affect the apportionment tallies flowing from the 2000 census because the President has already transmitted to Congress the statement required by 2 U.S.C. § 2a(a) and the Clerk of the House of Represen-

tatives has already sent to the states a certificate of the number of Representatives to which each state is entitled as required by 2 U.S.C. § 2a(b). To the extent Intervenors are attempting to question this court's jurisdiction, we conclude the Supreme Court's decision in *Franklin v. Massachusetts*, 505 U.S. 788 (1992), establishes that Plaintiffs' Census Act and constitutional claims are justiciable.

In *Franklin,* Massachusetts brought suit against the President, Secretary of Commerce, Census Bureau officials, and the Clerk of the House of Representatives challenging the enumeration and attribution of overseas military personnel to the state designated in the personnel files as their "home of record." *See id.* at 790-91. Massachusetts contended that the inclusion of overseas military personnel altered the relative state populations enough to shift a congressional seat from Massachusetts to Washington. *See id.* at 791. A three-judge district court concluded that the enumeration of military personnel serving abroad was arbitrary and capricious under the APA. As a remedy, the district court directed the Secretary of Commerce to eliminate the overseas military personnel from the apportionment count, directed the President to recalculate the appropriate number of representatives to which each state was entitled and to transmit those new calculations to Congress, and directed the Clerk of the House of Representatives to inform the states of the change. *See id.* The federal defendants appealed. *See id.*

Before addressing the merits of Massachusetts' constitutional claims, the Court noted that the suit raised a "thorn[y] standing question." *Id.* at 802. According to the Court, there was serious doubt whether jurisdiction existed to enter an injunction directing the President to recalculate and retransmit reapportionment figures to Congress. Absent such an injunction, a question existed whether Massachusetts' injury was redressable. *See id.* at 802-03. Nevertheless, a plurality of the Court concluded that the case was justiciable, stating:

> For purposes of establishing standing, however, we need not decide whether injunctive relief against the President was appropriate, because we conclude that the injury alleged is likely to be redressed by declaratory relief against the Secretary alone. The Secretary certainly has an interest in defending her policy determinations concerning the census; even though she cannot herself change the reapportionment, she has an interest in litigating its accuracy. And, as the Solicitor General has not contended to the contrary, we may assume it is substantially likely that the President and other executive and congressional officials would abide by an authoritative interpretation of the census statute and constitutional provision by the District Court, even though they would not be directly bound by such a determination.

Id. at 803 (citations omitted). Although only four Justices joined this portion of *Franklin,* a separate group of four Justices also concluded that Massachusetts' constitutional claims failed on the merits, albeit with no discussion of the question of justiciability. *See id.* at 820 (Stevens, J., concurring in part and concurring in the judgment) ("For the reasons stated in Part IV of the Court's opinion, I agree that the inclusion of overseas employees in state census totals does not violate the Constitution."). This led Justice Scalia to note in his separate opinion that the Court had concluded the case was justiciable. *See id.* at 824 n.1 (Scalia, J., concurring in part and concurring in the judgment) ("Although only a plurality of the Court joins that portion of Justice O'CONNOR's opinion which finds standing (Part III), I must conclude that the *Court* finds standing since eight Justices join Part IV of the Court's opinion discussing the merits of appellees' constitutional claims.").

This case stands in the identical posture as *Franklin.* This court clearly has jurisdiction to enter injunctive and

declaratory relief against Defendants. *See id.* at 802. Furthermore, this court can assume that the President, who is not a party as he was in *Franklin*, would abide by an authoritative interpretation of the Constitution and Census Act. *See id.* at 803. Finally, this court can assume that if the President transmits revised reapportionment calculations to Congress, the Clerk of the House of Representatives would submit a new certificate to the states pursuant to 2 U.S.C. § 2a(b). *See id.; see also id.* at 824 (Scalia, J., concurring in part and concurring in the judgment) ("[I]n light of the Clerk's purely ministerial role, we can properly assume that insofar as *his* participation is concerned, the sequence of events [envisioned by the majority] will occur."). Accordingly, Plaintiffs' Census Act and constitutional claims are justiciable.

B. APA Claim

This court reaches a different jurisdictional conclusion with regard to Plaintiffs' APA claim. Plaintiffs can advance their APA claim only if they can satisfy the statutory standing requirements set out in the APA. In particular, Plaintiffs must demonstrate that Defendants undertook "final agency action for which there is no other adequate remedy in a court." 5 U.S.C. § 704; *see also Colo. Farm Bureau Fed'n v. United States Forest Serv.*, 220 F.3d 1171, 1173 (10th Cir. 2000). Defendants assert that the Supreme Court's decision in *Franklin* forecloses APA review. Plaintiffs, on the other hand, claim they have statutory standing under section 209 of Public Law Number 105-119. *See* Pub. L. No. 105-119, Title II, § 209, 111 Stat. 2440, 2480-83 (1997) (reproduced in the notes to 13 U.S.C. § 141). Upon review of the parties' submissions and the pertinent authorities, this court concludes that *Franklin* controls and Plaintiffs lack statutory standing to bring their APA claim.

The three-judge panel in *Evans I* summarized the holding in *Franklin* as follows:

> In *Franklin,* Massachusetts challenged the apportionment determination following the 1990 Census, in which federal overseas employees were counted, and which resulted in Massachusetts' loss of a Congressional seat. A three-judge panel of the district court held that the inclusion of such federal overseas employees was arbitrary and capricious under the APA. On appeal, the Supreme Court reversed, holding, with respect to Massachusetts' APA claim, "[b]ecause it is the President's personal transmittal of the report to Congress that settles the apportionment, until he acts there is no determinate agency action to challenge." *Franklin*, 505 U.S. at 799, 112 S. Ct. 2767. Because the President is not an agency, there was no statutory standing to challenge the apportionment under the APA.

143 F. Supp. 2d at 1295-96. Based on *Franklin,* the court in *Evans I* held that Plaintiffs lacked statutory standing to bring an APA challenge to Defendants' failure to enumerate overseas missionaries, while enumerating federal employees serving overseas. *See id.* at 1296.

Plaintiffs contend, however, that they have APA standing to challenge Defendants' use of imputation during the 2000 census based on section 209 of Public Law Number 105-119. Section 209(b) provides as follows:

> Any person aggrieved by the use of any statistical method in violation of the Constitution or any provision of law . . . in connection with the 2000 or any later decennial census, to determine the population for the purposes of the apportionment or redistricting of Members in Congress, may in a civil action obtain declaratory, injunctive, and any other appropriate relief against the use of such method.

§ 209(b), 111 Stat. at 2481. Plaintiffs' contentions notwithstanding, this court concludes that section 209 does not create

statutory standing to bring the type of APA challenge at issue here. We are well aware the Supreme Court has indicated that section 209 eliminates the prudential standing concerns addressed in *Franklin*. *See Dep't of Commerce v. United States House of Representatives*, 525 U.S. 316, 328-29 (1999). In this case, however, unlike *House of Representatives*, Plaintiffs' challenge comes after the 2000 census has been completed, the President has transmitted reapportionment figures to Congress, and the Clerk of the House of Representatives has issued a certificate to each state indicating the number of representatives to which that state is entitled. We conclude that this differing procedural posture disposes of Plaintiffs' claim that section 209 creates statutory standing for their APA claim.

In section 209(d), Congress defined an "aggrieved person" for purposes of bringing the action allowed under section 209 as, *inter alia,* "any resident of a State whose congressional representation or district *could be changed* as a result of the use of a statistical method challenged in the civil action." § 209(d)(1), 111 Stat. at 2482 (emphasis added). This language evidences congressional intent to facilitate a prospective remedy for any constitutional or statutory infirmity in a procedure Defendants propose to use in a decennial census before the procedure is actually used. Indeed, the remedy set out in section 209(b) specifically contemplates only a prospective relief: "declaratory, injunctive, and any other appropriate relief *against the use* of" any statistical method that violates the Constitution or any other provision of law. § 209(b), 111 Stat. at 2481 (emphasis added).

Congress clearly intended section 209 to provide a vehicle for expedited review of the methods chosen by Defendants for use in the 2000 census prior to the actual undertaking and completion of the census. This conclusion is borne out by the congressional findings accompanying Section 209, which explicitly recognize that

> the decennial enumeration of the population is a complex and vast undertaking, and if such enumeration is conducted in a manner that does not comply with the requirements of the Constitution or laws of the United States, it would be impracticable for the States to obtain, and the courts of the United States to provide, meaningful relief *after* such enumeration has been conducted.

§ 209(a)(8),111 Stat. at 2481 (emphasis added). Moreover, Congress recognized that its desire to have these types of challenges resolved prior to the actual conduct of the census was essential in order to fulfill its "commit[ment] to providing the level of funding that is required to perform the entire range of constitutional census activities." § 209(a)(9), 111 Stat. at 2481. In furtherance of this goal, Congress specifically deemed "sufficiently concrete and final" several precursor acts undertaken by Defendants in the years leading up to the 2000 census.[6]

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[6] In this regard, section 209(c) provides as follows:

> (c) For purposes of this section—
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> (1) the use of any statistical method as part of a dress rehearsal or other simulation of a census in preparation for the use of such method, in a decennial census, to determine the population for purposes of the apportionment or redistricting of Members of Congress shall be considered the use of such method in connection with that census; and
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> (2) the report ordered by title VIII of Public Law 105-18 and the Census 2000 Operational Plan shall be deemed to constitute final agency action regarding the use of statistical methods in the 2000 decennial census, thus making the question of their use in such census sufficiently concrete and final to now be reviewable in a judicial proceeding.

Pub. L. No. 105-119, Title II, § 209(c), 111 Stat. 2440, 2481-83 (1997). In light of this provision we can summarily reject Plaintiffs' assertion that section 209 must apply even after the completion of a census because "no plaintiff has standing to bring an APA claim until they have suffered a

III. DISCUSSION

A. Census Act

The Census Clause of the Constitution requires that an "actual Enumeration shall be made within three Years after the first Meeting of the Congress of the United States, and within every subsequent Term of ten Years, in such Manner as they shall by Law direct." U.S. Const. art. I, § 2, cl. 3. The Fourteenth Amendment requires that the House of Representatives be "apportioned amor3 the several States according to their respective numbers, counting the whole number of persons in each State."[7] U.S. Const. amend. XIV, § 2.

In *Wisconsin v. City of New York*, the Supreme Court acknowledged that "the text of the Constitution vests Congress with virtually unlimited discretion in conducting the decennial "actual Enumeration.'" 517 U.S. 1, 19 (1996). Through the Census Act, Congress delegated to the Secretary of the Department of Commerce the responsibility to take a decennial census of the population "in such form and content as he may determine." 13 U.S.C. § 141(a). The Supreme Court held in *Wisconsin* that "so long as the Secretary's conduct of the census is consistent with the constitutional language and the constitutional goal of equal representation, it is within the limits of the Constitution." *Id.* at 19-20

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concrete injury." The Supreme Court recognized as much in *Dep't of Commerce v. United States House of Representatives*, 525 U.S. 316, 328-30 (1999).

[7] To the extent that Plaintiffs' filings could be read to suggest that the reference to "whole number of persons" in the Fourteenth Amendment supports their belief that each individual person must be actually counted in the census, this court summarily rejects the contention. This section of the Fourteenth Amendment amended Article I so that African-Americans are counted as "whole persons" instead of as three-fifths of a person as it was at the time the Constitution was adopted. *Compare* U.S. Const. art. I, § 2, cl. 3 *with* U.S. Const. amend. XIV, § 2.

(quotation and citation omitted). The Secretary's decisions "need bear only a reasonable relationship to the accomplishment of an actual enumeration of the population, keeping in mind the constitutional purpose of the census." *Id.* at 20.

Plaintiffs contend, however, that 13 U.S.C. § 195, as interpreted by the Supreme Court in *House of Representatives*, precludes Defendants from using figures derived from imputation for the purpose of reapportioning the House of Representatives. Section 195 provides as follows: "Except for the determination of population for purposes of apportionment of Representatives in Congress among the several States, the Secretary shall, if he considers it feasible, authorize the use of the statistical method known as 'sampling' in carrying out the provisions of this title." 13 U.S.C. § 195. In *House of Representatives,* the plaintiffs challenged the following two sampling programs that the Census Bureau proposed to use during the 2000 census; the Nonresponse Followup Program ("NFP") and the Integrated Coverage Measurement ("ICM"). *See* 525 U.S. at 324-25. Under the NFP, enumerators would have visited a randomly selected sample of nonresponding housing units, which would be statistically representative of all housing units in a nonresponding tract, and would use this information to estimate the characteristics of the remaining 100 nonresponding units for which the Census Bureau had no information. *See id.* Under the ICM, stratified sampling would have been used by the Bureau. *See id.* at 325. Each of the country's seven million census blocks were classified into strata, defined by the characteristics of each block. *See id.* The Census Bureau would select blocks at random from each stratum to conduct interviews and estimate characteristics of the whole based on these results. *See id.* The Supreme Court held that § 195 of the Census Act "directly prohibits the use of sampling in the determination of population for purposes of apportionment." *Id.* at 338. The Court indicated that whether sampling was used as a supplement or as a substitute

its use to determine the population is impermissible. *See id.* at 342.

With this authority as a backdrop, Plaintiffs assert that hot deck imputation is sampling and that its use by Defendants in the 2000 census violated section 195. In particular, Plaintiffs claim that through the use of hot deck imputation, Defendants sought to estimate by means of a sample or statistical model people who were not actually counted by traditional methods of enumeration. Accordingly, the essence of Plaintiffs' argument is that sampling and imputation are indistinguishable because in both processes, a portion of the population is used to infer information about the population as a whole.

Whether hot deck imputation is sampling and thus forbidden by section 195 is a question of law for this court to decide. *See Walker v. United Parcel Serv., Inc.*, 240 F.3d 1268, 1277 (10th Cir. 2001) (holding that the proper interpretation of a federal statute is a question of law). For this reason, the divergent views of the parties' experts as to whether imputation is sampling does not create a question of fact precluding summary judgment. This court has considered the views of those experts, however, and finds them helpful in resolving Plaintiffs' claims.

We begin by noting that section 195 does not preclude the Census Bureau from the use of every type of statistical methodology in arriving at apportionment figures during a decennial census. Instead, it prohibits only "the use of the statistical method known as 'sampling.'" 13 U.S.C. § 195. The parties' submissions lead us to conclude that statistical sampling and imputation are separate statistical methodologies and that they were viewed as such at the time of the enactment of § 195. In this regard, we agree with the following passage in *Orr v. Baldridge:*

> The first procedure for collecting data for the 1980 decennial census was the mailout-mailback method, whereby questionnaires where mailed to [almost every housing unit in the United States]. Although the recipients were instructed to mail the questionnaires back to the Census Bureau ("the Bureau"), some questionnaires were not returned. All housing units for which questionnaires were not returned were scheduled for follow-up enumeration, which included visits by at least two different enumerators. If information was not obtained in this process, enumerators sought information from knowledgeable outside sources, such as landlords or neighbors. Even after this procedure, the occupancy status (vacant or occupied) and/or the number of people in the unit could not be determined for some units ("unclassified units").
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> The Bureau then had the task of selecting a method for dealing with the problem of unclassified units so as to minimize distortion in the population counts. The alternative suggested by the State of Indiana and its Governor, ignoring the units or tabulating them as "not reported," is the equivalent of imputing zero or no persons in the unclassified units. This would result in an undercount of the population because some of the classified units were known to be occupied.
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> The plaintiffs concede, and the Court agrees, that hot deck imputation is not sampling. Sampling is the selection of a subset of units from a larger population in such a way that each unit of the population has a known chance of selection. Sampling is used where a scientifically selected set of units can be used to represent the entire population from which they are drawn. Inferences about the entire population can be based on sample results. Imputation, on the other hand,

> is a procedure for determining a plausible value for missing data. Imputation is used in both sample surveys and censuses with the goal of achieving as complete as possible an enumeration of the sampled or population units. In short, sampling is one of a variety of techniques which *may* be used in an attempt to improve the accuracy of a count (unless, as here, it is prohibited by law), while imputation, in some form, *must* be performed once the census taker determines that data from known and identified housing units is missing. Thus hot deck imputation does not violate § 195's specific ban on sampling.
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> . . . [T]he Bureau had to use some form of imputation. Some action had to be taken with regard to the small number of identified housing units from which either no information or incomplete information was obtained. Every option available to the Bureau encompassed some form of imputation, either implicitly or explicitly.

Slip. op. at 3-4, 5-7.

Although Plaintiffs struggle mightily to convince the court that sampling and imputation are two aspects of the same methodology, their arguments are not borne out by the record. Sampling is the technique of determining the traits of the entire population by collecting and analyzing data from a representative segment of that population. In hot deck imputation, on the other hand, there is no representative sample from which to infer the characteristics of the larger population. Instead, a single, fully enumerated housing unit is used to draw conclusions about a neighboring housing unit for which data is missing. That is, imputation is used to fill in missing data on the assumption that similar types of dwellings in the same geographic area will have similar characteristics.

The administrative record and the parties' filings furthermore make clear that sampling is a statistical methodology utilized at the data collection stage, while imputation is a distinct statistical methodology utilized at the data processing stage. That is, with a census or survey based on sampling, a sample design is created identifying a particular portion of the population that will be surveyed. Only those pre-identified persons or housing units are contacted for the purpose of data collection. That data is then processed and used to make conclusions about a larger population. Imputation, on the other hand, is used only at the data processing stage. It is only employed to account for discrete incomplete or inconsistent data. For instance, imputation is used to assign a value to an empty field on an otherwise completed questionnaire or to complete a blank questionnaire, thereby forming a complete record for a given respondent. Imputation is also used when two responses on a questionnaire are inconsistent, rendering one of the responses implausible, *e.g.,* a response could indicate that a person is two-years old and also the spouse of the householder.

The administrative record and the parties' filings demonstrate that, if utilized, sampling and imputation operate at completely different levels and entirely independent of each other. Accordingly, although both methodologies could conceivably improve the accuracy of a given survey or census, they are not the same statistical method. Because imputation is not "the statistical method known as 'sampling,'" section 195 does not prohibit its use in the 2000 census. 13 U.S.C. § 195. For that same reason, the Supreme Court's decision in *House of Representatives,* a case clearly dealing with proposed sampling methodologies, does not foreclose the use of imputation in the 2000 census.

In concluding that imputation is "the statistical method known as 'sampling,'" Judge Greene quite correctly notes in his dissent that the Census Bureau did seem to blur the

distinction between sampling and imputation in its 1997 report to Congress. *See* Dissenting Op. at 3; *see also* United States Department of Commerce Bureau of the Census, Report to Congress—The Plan for Census 2000, at 23 (Revised and Reissued August 1997) (noting the historic use of "statistical methods" such as imputation in a section of the report with the following heading: "Reliance on Sampling in Previous Censuses"). Because this court found it unnecessary to reach the question of whether the Census Bureau's interpretation of § 195 is entitled to *Chevron* deference,[8] we have not relied on reports produced by the Census Bureau in determining the meaning of § 195. Nevertheless, it must be noted that the 1997 report to Congress was produced at a time when the Census Bureau was seeking to assuage concerns by many members of Congress over the proposed use of sampling in Census 2000. It apparently chose to do so by tying imputation, a statistical methodology utilized by the Census Bureau since 1960, to the sampling programs at issue in *House of Representatives*. Under these circumstances, we think that the 1997 report to Congress has very little to say with regard to whether imputation is "the statistical method known as 'sampling.'" 13 U.S.C. § 195.

Furthermore, we do not see how the dissent takes any comfort from the comments by Census Bureau officials set forth in *Young v. Klutznick*, 652 F.2d 617, 621 (1981). *See* Dissenting Op. at 3-4. The parties do not contest that count imputation has been used in each decennial census since 1960. Furthermore, as *Orr v. Baldridge* makes clear, the use of imputation shifted one seat in the House of Representatives from Indiana to Florida in the 1980 decennial census. With this backdrop, the comments of the Census Bureau officials in *Young* regarding the 1980 decennial census clearly demonstrates that the Census Bureau did not think that imputation

[8] *Chevron U.S.A., Inc. v. Natural Res. Def. Council*, 467 U.S. 837 (1984).

was prohibited by § 195. Instead, what was at issue in *Young*, was the question of whether gross estimates would be used to attribute a possible undercount of five million people to various states and localities without adequate statistical methodologies. *See Young*, 653 F.2d at 621 ("[Census Bureau officials] explained that survey techniques and demographic analysis were not sufficiently advanced as sciences to permit distribution or allocation of the estimated undercount to states and localities on anything other than a pro rata basis using population figures from the census.").

Finally, we do not think that Justice Breyer's dissenting opinion in *House of Representatives* can be read for the proposition that imputation is the "statistical method known as sampling." Instead, we read Justice Breyer's dissent as asserting that § 195 does not preclude the use of any statistical methodology in the census, as long as that methodology is only used to supplement, as opposed to establish, the apportionment count. *See House of Representatives*, 525 U.S. at 350 (Breyer, J., dissenting) ("The language of § 195 permits a distinction between sampling used as a substitute and sampling used as a supplement."). In that vein, Justice Breyer noted that imputation was simply one such method used by the Census Bureau and expressly recognized that it was distinct from sampling. *Compare id.* at 352 (Breyer, J., dissenting) ("Census Bureau practice also helps to support this limited interpretation of the [§ 195's] scope. Both before and after § 195 was enacted in 1957, the census has used sampling techniques in one capacity or another in connection with its determination of population, most often as a quality check on the headcount itself."), *with id.* (Breyer, J., dissenting) ("The Census Bureau *has also used a form of statistical estimation to adjust or correct the actual headcount.* Since at least 1940, the Census Bureau has used an estimation process called 'imputation' to fill in gaps in its headcount." (emphasis added)).

For the reasons set out above, this court concludes that hot deck imputation is not "the statistical method known as 'sampling.'" 13 U.S.C. § 195. Thus its use by Defendants during Census 2000 did not violate the Census Act.

B. Census Clause

As noted above, taken together, Article I of the Constitution and the Fourteenth Amendment require an "actual Enumeration" of the "whole number of persons in each State" every ten years. U.S. Const. art. I, § 2, cl. 3; *id.* amend. XIV, § 2. Relying on what they contend is the plain meaning of the phrase "actual enumeration," discussions during the Constitutional Convention demonstrating that the Founders understood the difference between a head count and an estimation of the population, and Justice Scalia's separate opinion in *House of Representatives,* Plaintiffs contend that the Constitution forbids the use of any statistical estimations in the conducting of a decennial census. Upon review of the record and pertinent authorities, these arguments are unconvincing.

As noted above, the Constitution provides that the decennial censuses shall take place "in such Manner as [Congress] shall by Law direct." *Id.* art. I, § 2, cl. 3. This text vests Congress with virtually unlimited discretion in conducting the decennial actual Enumeration. *See Wisconsin,* 517 U.S. at 19. Congress has delegated its broad authority to the Secretary of Commerce. *See* 13 U.S.C. § 141(a). In light thereof, the Supreme Court has held that so long as the Secretary of Commerce's conduct of the census is "consistent with the . . . constitutional goal of equal representation, it is within the limits of the Constitution." *Wisconsin,* 517 U.S. at 19-20 (quotation omitted); *see also id.* at 20 (holding that decisions of the Secretary of Commerce "need bear only a reasonable relationship to the accomplishment of an actual enumeration of the population, keeping in mind the constitutional purpose of the census").

In view of the record, this court concludes that Defendants' use of imputation during the 2000 census was reasonably consistent with the accomplishment of an actual enumeration of the population. In the 2000 census, the Census Bureau processed data for over 120 million households, including over 147 million paper questionnaires and 1.5 billion pages of printed material. The workload during peak operations was approximately 3.3 million forms per day. In light of the enormity and complexity of this undertaking, it is inconceivable that the Constitution prohibits the use of statistical methodologies to account for missing and incomplete data. As noted by the court in *Orr*, some type of imputation must take place by practical necessity, whether it is the imputation of statistically plausible values for the missing data or the imputation of a zero. The latter approach appears clearly inconsistent with the constitutional imperative of an actual enumeration. In fact, a study conducted by the Census Bureau after the completion of the 2000 census demonstrates that the vast majority of the unclassified housing units for which a status was imputed, roughly seventy-five percent, were added by census enumerators in the field or other census programs. The study reveals that these units were clearly valid residences that were simply not captured because of errors at the data-processing stage. Forcing Defendants to ignore these residences hardly seems consistent with an actual enumeration of the population.[9]

The court further concludes that Plaintiffs' effort to ascribe some exalted meaning to "actual enumeration" fails when that term is considered in the context of the entire text of Article I and the history of the Census Clause. It is clear from the text of Article I, when read in conjunction with the proceedings of the Constitutional Convention, that the first apportionment of

[9] For this reason, in addition to rejecting Plaintiffs' objections to imputation generally, we also reject Plaintiffs' objections to status imputation in particular.

the House of Representatives was necessarily based on the grossest of estimates. *See* U.S. Const. art. I, § 2; 1 Max Farrand, Records of the Federal Convention of 1787, at 578-79 (1927) (explaining that delegates to the Constitutional Convention recognized that the first apportionment would be based on a "conjectural ratio"). The constitutional requirement of an enumerative census was simply to distinguish that process from the conjectural apportionment of the first Congress. Furthermore, the phrase "actual enumeration," so heavily relied on by Plaintiffs, was added by the Committee of Style and Arrangement, a committee which did not operate to alter the substance of any of the resolutions passed by the Constitutional Convention. *Cf. Nixon v. United States*, 506 U.S. 224, 231 (1993). This court is simply unwilling to adopt the draconian interpretation Plaintiffs would have us ascribe to "actual enumeration."

As a final matter, we note that Plaintiffs' reliance on Justice Scalia's separate opinion in *House of Representatives* is unavailing. It is true that Justice Scalia and the three Justices joining his separate opinion in *House of Representatives* seemed to opine that the use of "estimation techniques" in conducting the decennial censuses would violate the Census Clause. 525 U.S. at 347-48 (Scalia, J., concurring in part). Nevertheless, Justice Stevens and the three Justices that joined his dissenting opinion clearly indicated that statistical methodologies used to improve the accuracy of the census count, including statistical sampling, were consonant with the Constitutional requirement of an "actual enumeration." *Id.* at 362-64 (Stevens, J., dissenting). Justice O'Connor did not offer an opinion on the constitutionality of statistical sampling, noting that it was unnecessary to do so in light of the conclusion that the proposed sampling programs violated § 195. *See id.* at 343-44. Faced with this split, and in light of the analysis set out above, this court concludes that the Constitution does not prohibit the use of narrowly tailored statistical methodologies,

such as hot deck imputation, for the purpose of improving the accuracy of the decennial census and furthering "the constitutional goal of equal representation." *Franklin*, 505 U.S. at 804.

IV. CONCLUSION

For those reasons set out above, this court GRANTS Defendants' and Intervenors' motions for summary judgment and DENIES Plaintiffs' motion for summary judgment. The clerk is directed to enter judgment accordingly.

DATED this, 1st day of November, 2001.

/s/ Michael R. Murphy
MICHAEL R. MURPHY
United States Circuit Judge

/s/ Dale A. Kimball
DALE A. KIMBALL
United States District Judge

No. 2:01CV0023B, *State of Utah v. Evans*

GREENE, United States District Judge, concurring in part and dissenting in part.

I concur with the majority that the plaintiffs' Census Act claim is justiciable. I disagree, however, with the majority's conclusion that the use of imputation to arrive at apportionment numbers in the 2000 Census was not prohibited under 13 U.S.C. § 195, as interpreted by the Supreme Court in *Dep't of Commerce v. House of Representatives*, 525 U.S. 316 (1999). For that reason I would rule that § 195 of the Census Act was violated and that the injunctive and declaratory relief sought by plaintiffs should be granted. My analysis is limited to a consideration of the statute, so I do not reach or discuss the APA or constitutional claims asserted by plaintiffs, and I would abstain from acting thereupon. The issue of disagreement presented by this dissent is whether the use of "imputation" in arriving at the final 2000 Census apportionment count constitutes "sampling" which is prohibited under § 195 of the Census Act. If so, the statute was violated. If not so, no violation occurred.

Judge Michael Murphy, in a very well written opinion for the majority in this case, has ruled that the use of imputation is not prohibited by the statute for the following reasons:

> Sampling is the technique of determining the traits of the entire population by collecting and analyzing data from a representative segment of that population. In hot deck imputation, on the other hand, there is no representative sample from which to infer the characteristics of the larger population. Instead, a single, fully enumerated housing unit is used to draw conclusions about a neighboring housing unit for which *data is missing*. That is, *imputation is used to fill in missing data on the assumption that similar types of dwellings in the same geographic area will have similar characteristics*. Because imputation is not "the statistical method known as 'sampling,'" section 195 does not prohibit its use in the 2000 census.

Majority Opinion at 25 (emphasis added).[1]

> The statute in question, as amended in 1976, provides:
>
> *Except for the determination of population for purposes of apportionment of Representatives in Congress among the several States*, the Secretary shall, if he considers it feasible, authorize the use of the statistical method known as "sampling" in carrying out the provisions of this title.

13 U.S.C. § 195 (emphasis added).

The Supreme Court in *House of Representatives* ruled that "the Section maintains its prohibition on the use of statistical sampling in calculating population for purposes of apportionment" and that a plain reading of the "text of the statute" demonstrates that "the use of sampling for apportionment purposes" is prohibited. 525 U.S. at 339, 343. The court went on to conclude that "the Census Act prohibits the proposed uses of statistical sampling in calculating the population for purposes of apportionment." *Id.* at 343.

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[1] In coming to its conclusion, the majority relies in part on dicta in *Orr v. Baldrige*, Slip. Op. (D. Ind. July 1,1985), an unappealed district court case in which imputation, apparently for tactical reasons, was stipulated not to constitute sampling. Since that matter did not involve any dispute concerning imputation as related to sampling, the court's dicta was based on a non-issue that was neither briefed nor argued. In this regard, Justice Souter enunciated this admonition in *Church of Lukumi Babalu Aye, Inc. v. City of Hialeah*, 113 S. Ct. 2217, 2247 (1993), as to such undisputed issues: "Sound judicial decisionmaking requires 'both a vigorous prosecution and a vigorous defense' of the issues in dispute . . . ."

Since the use of imputation was not directly before the court in *House of Representatives*, of course there was no ruling as to whether or not it is prohibited by § 195. However, as will be seen, the essence of the use of imputation in Census counting is that it is a form of sampling. As such, it ought to be struck down for the same reasons the proposed uses of statistical sampling were struck down in *House of Representatives*. No definition of sampling was set forth in *House of Representatives*, but for many years the Census Bureau has defined sampling broadly, and its basic meaning has been and is common knowledge. Hence, the "statistical method known as sampling" is no secret and it was aptly described by the Bureau in its 1997 report to Congress thusly:

> In our common experience, "sampling" occurs whenever the information on a portion of a population is used to infer information on the population as a whole. . . . In laymen's terms, a "sample" is taken whenever the whole is represented by less than the whole.

United States Department of Commerce Bureau of the Census, Report to Congress—The Plan for Census 2000, p. 23 (Revised and Reissued August 1997).

Prior to 1994, the Bureau studiously avoided the use of estimates to arrive at a population count for purposes of apportionment. That prior history, including reference to testimony given by the Bureau in court proceedings and to Congress, was noted in the majority opinion written by Justice O'Connor in *House of Representatives*. *See* 525 U.S. at 340. The consistent past opposition by the Census Bureau concerning use of estimates in determining the apportionment count was explained by a Bureau representative in a court proceeding in 1981:

> [S]ince 1790 the census enumeration has never been adjusted to reflect an *estimated* undercount and that in their opinion Congress by statute had prohibited such an

> adjustment in the figures used for purposes of Congressional apportionment.

Young v. Klutznick, 652 F.2d 617, 621 (1981) (emphasis added).

By the mid-1990s, as set forth in its 1997 Census Report to Congress, the Bureau's position had changed and was in full support of the use of sampling, including the use of imputation. In that Report, under a general section entitled "Reliance on Sampling in Previous Censuses" and also under a subheading entitled "Use of Scientific Sampling to Increase Accuracy," imputation and other forms of sampling were discussed. *See* United States Department of Commerce Bureau of the Census, Report to Congress—The Plan for Census 2000, p. 23,[2] The Bureau's reasoning for the use of imputation in Census apportionment counting was articulated by Kenneth Prewitt, then Director of the Bureau. He stated that "the apportionment number includes imputed Census records, that is people we have not talked to, but [which] we impute into the Census file." *Oversight of the 2000 Census: Hearing of the Census Subcommittee of the House of Government Reform Committee*, at 2 (June 22, 2000). Mr. Prewitt further explained:

> [I]n the apportionment number there will be a certain number of Census records which are put there through are imputed process. Those are not people with names. They are not people who filled out a form. They are people who our statistical processes lead us to believe by putting that Census record in there we have given the country a more accurate number. That's an *adjusted* number.

Id. at 3 (emphasis added).

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[2] The Bureau's "Plan for Census 2000" states: "The Census Bureau also has used a form of statistical estimation to adjust or correct its actual headcount. . . ."

In his dissenting opinion in *House of Representatives*, Justice Breyer argued that statistical sampling should be allowed as a *supplement* in arriving at final population figures for purposes of apportionment. *See* 525 U.S. at 353. Justice Breyer then discussed imputation as an appropriate statistical procedure in use by the Census Bureau to "fill in gaps" in arriving at the final population count. *Id.* at 352.

Justice Breyer's description of the way imputation is used to enhance the population count fits well within the definition of sampling used by the Bureau now and historically. Justice Breyer said:

> When an enumerator believes a residence is occupied but is unable to obtain any information about how many people live there, the Census Bureau "imputes" that information based upon the demographics of nearby households. Imputation was responsible, for example, for adding 761,000 people to the Nation's total population in 1980 and 53,590 people in 1990.

Id.

The majority in *House of Representatives* rejected Justice Breyer's position that sampling could properly be used as a supplement in population counting. The same reasoning should apply to the use of imputation as above described.

From the foregoing discussion, imputation is revealed as a form of sampling to establish and enhance a portion of the total population by imputing to nonresponding households and housing units the same number of occupants who live in certain occupied households.

Whether by the use of imputation apportionment numbers are enhanced by the use of a "statistical process" in order to arrive at "adjusted" numbers, as described by the Census Bureau; or whether the number is adjusted by a "statistical estimate" as described by Justice Breyer in order to "fill in

gaps;" or whether "estimation techniques" are utilized to enhance population figures in the manner suggested by Justice Scalia in *House of Representatives*; [3] or whether the number is enhanced so as to "*fill in missing data* on the *assumption* that similar types of dwellings in the same geographic area will have similar characteristics" as is described by the majority in this case;—the result is the same. All of these examples describe a form of sampling known as imputation in which statistical estimates are used to arrive at population apportionment. This crosses the line and violates § 195 of the Census Act. Accordingly, the use of imputation should be struck down as a prohibited form or subset of sampling under the reasoning of *House of Representatives*.

Manifestly, "sampling" and "imputation" in substance and effect are indistinguishable because both use a portion of the population to infer information concerning segments of the population in order to arrive at final figures concerning the population as a whole.

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[3] Justice Scalia, joined by three other justices in *House of Representatives*, warned of the use of "estimation techniques" in arriving at population/apportionment counts:

> To give Congress the power, under the guise of regulating the "Manner" by which the census is taken, to select among various estimation techniques having credible (or even incredible) "expert" support is to give the party controlling Congress the power to distort representation in its favor. In other words, genuine enumeration may not be the most accurate way of determining population, but it may be the most accurate way of determining population with minimal possibility of partisan manipulation. The prospect of this Court's reviewing estimation techniques in the future, to determine which of them so obviously creates a distortion that it cannot be allowed, is not a happy one.

525 U.S. at 348-49. Justice Scalia's comments were not directed specifically to § 195 of the Census Act, but they are instructive because the very mischief he seeks to avoid in eschewing "estimation techniques" could constitute violation of the statute.

For the reasons aforesaid, I respectfully dissent.

DATED this 30th day of October, 2001.

/s/ J. Thomas Greene
J. THOMAS GREENE
Senior United States District Judge

APPENDIX B

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF UTAH, CENTRAL DIVISION

Case No. 2:01-CV-292G

STATE OF UTAH, *et al.*,
Plaintiffs,

v.

EVANS, *et al.*,
Defendants.

NOTICE OF APPEAL

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The plaintiffs hereby appeal to the United States Supreme Court from the final judgment entered by the three-judge district court on November 5, 2001, dismissing the complaint in this action. This appeal is taken pursuant to 28 U.S.C. §§ 1253, 2101(b), and Pub. L. No. 105-119, § 209(e)(1), 111 Stat. 2482 (codified at 13 U.S.C. § 141 Note).

RESPECTFULLY SUBMITTED this 5th day of November, 2001.

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APPENDIX C

CONSTITUTIONAL PROVISIONS

U.S. Const. art. I, § 2, cl. 3

Representatives and direct Taxes shall be apportioned among the several States which may be included within this Union, according to their respective Numbers, which shall be determined by adding to the whole Number of free Persons, including those bound to Service for a Term of Years, and excluding Indians not taxed, three fifths of all other Persons. The actual Enumeration shall be made within three Years after the first Meeting of the Congress of the United States, and within every subsequent Term of ten Years, in such Manner as they shall by Law direct. The Number of Representatives shall not exceed one for every thirty Thousand, but each State shall have at Least one Representative; and until such enumeration shall be made, the State of New Hampshire shall be entitled to chuse three, Massachusetts eight, Rhode-Island and Providence Plantations one, Connecticut five, New York six, New Jersey four, Pennsylvania eight, Delaware one, Maryland six, Virginia ten, North Carolina five, South Carolina five, and Georgia three.

U. S. Const. amend. XIV, §§ 1-2

Section 1. All persons born or naturalized in the United States, and subject to the jurisdiction thereof, are citizens of the United States and of the State wherein they reside. No State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws.

Section 2. Representatives shall be apportioned among the several States according to their respective numbers, counting the whole number of persons in each State, excluding Indians

not taxed. But when the right to vote at any election for the choice of electors for President and Vice President of the United States, Representatives in Congress, the Executive and Judicial officers of a State, or the members of the Legislature thereof, is denied to any of the male inhabitants of such State, being twenty-one years of age, and citizens of the United States, or in any way abridged, except for participation in rebellion, or other crime, the basis of representation therein shall be reduced in the proportion which the number of such male citizens shall bear to the whole number of male citizens twenty-one years of age in such State.

APPENDIX D

STATUTES

13 U.S.C. § 141. Population and other census information

(a) The Secretary shall, in the year 1980 and every 10 years thereafter, take a decennial census of population as of the first day of April of such year, which date shall be known as the "decennial census date", in such form and content as he may determine, including the use of sampling procedures and special surveys. In connection with any such census, the Secretary is authorized to obtain such other census information as necessary.

* * * *

(Aug. 31, 1954, c. 1158, 68 Stat. 1019; Aug. 28, 1957, Pub.L. 85-207, § 9, 71 Stat. 483; Dec. 23, 1975, Pub.L. 94-171, §§ 1, 2(a), 89 Stat. 1023, 1024; Oct. 17, 1976, Pub.L. 94-521, § 7(a), 90 Stat. 2461.)

13 U.S.C. § 195. Use of sampling

Except for the determination of population for purposes of apportionment of Representatives in Congress among the several States, the Secretary shall, if he considers it feasible, authorize the use of the statistical method known as "sampling" in carrying out the provisions of this title.

(Added Pub.L. 85-207, § 14, Aug. 28, 1957, 71 Stat. 484, and amended Pub.L. 94-521, § 10, Oct. 17, 1976, 90 Stat. 2464.)